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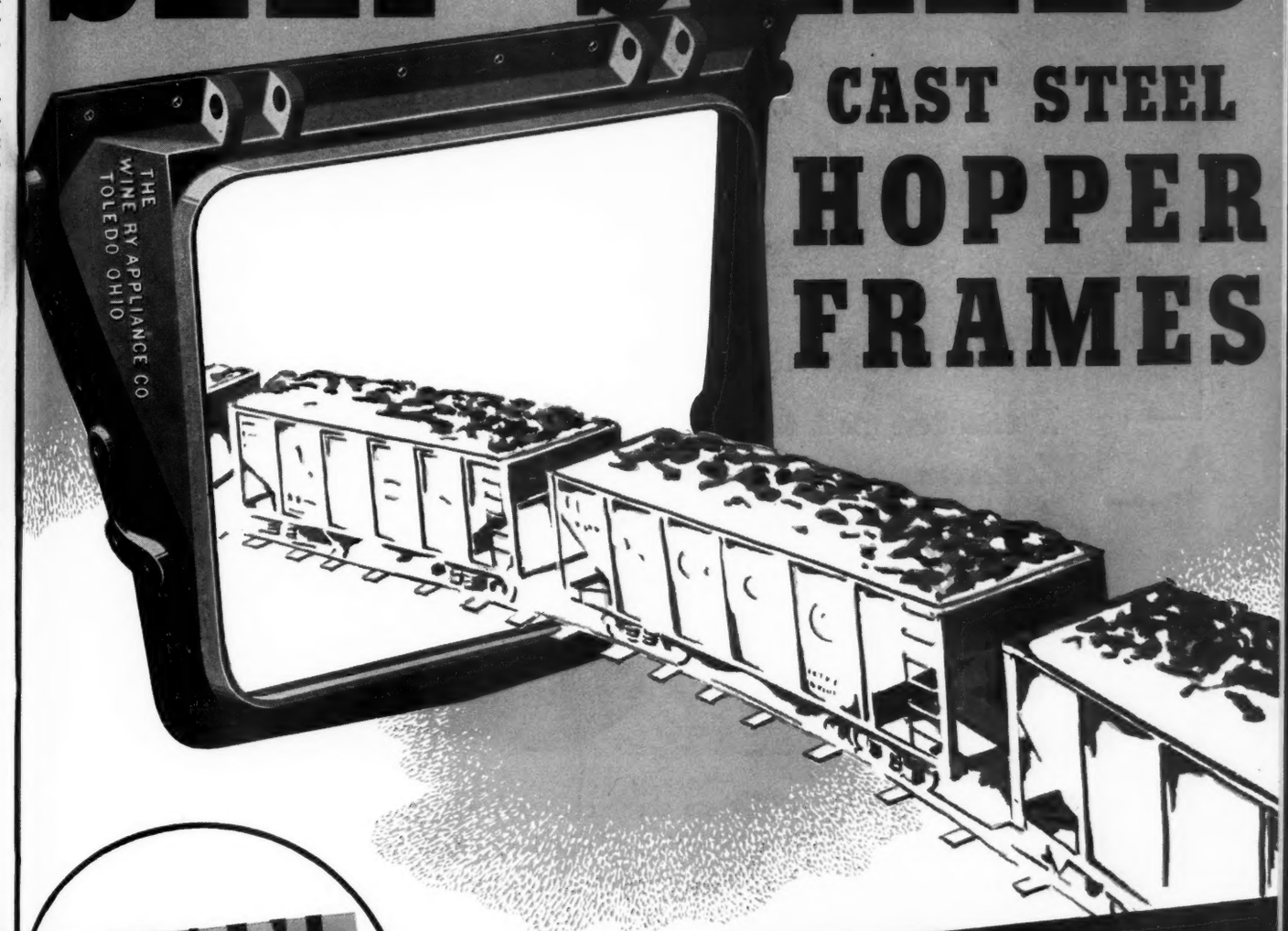

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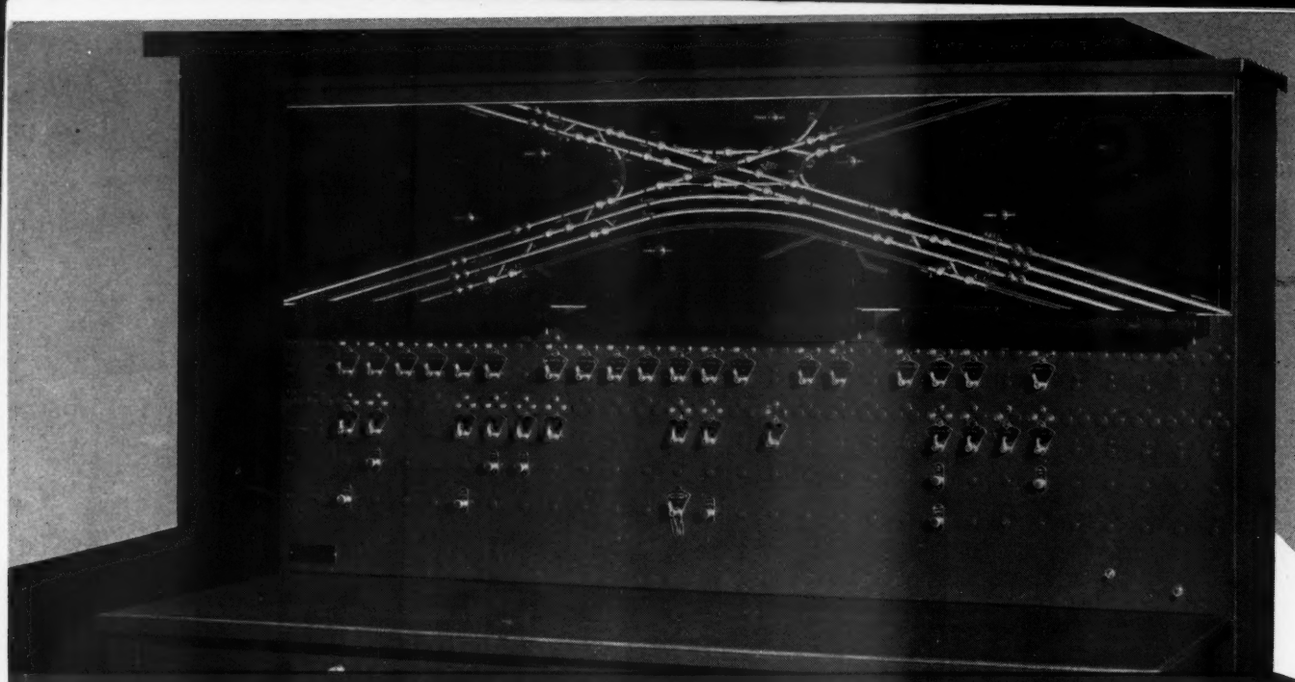

At An Important Junction

"Union" UNIT-LEVER RELAY INTERLOCKING

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THERE are several distinct types of "Union" interlocking, each peculiarly adapted to a particular kind of application, and each having special advantages. Here is an example of why a certain type of interlocking may be best suited to meet local operating requirements.

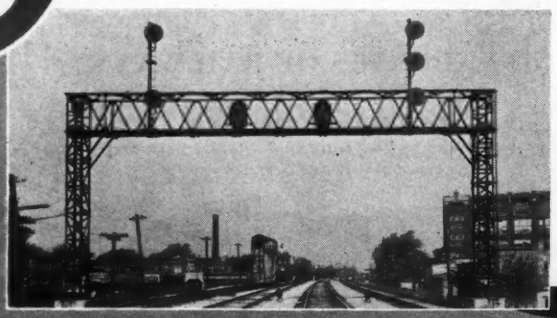
CONDITIONS: A complicated interlocking consisting of 10 crossovers, 8 single switches and 1 movable-point frog, with 22 operative signal units controlling a total of 133 possible routes.

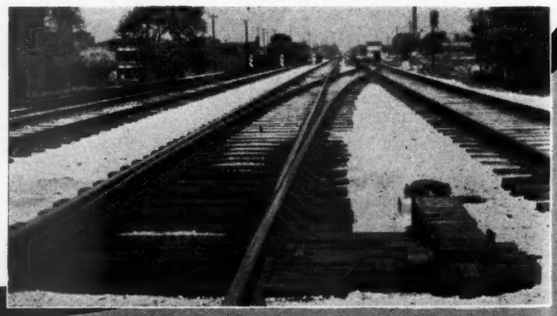
THE PROBLEM: To provide fast and simplified control of the above interlocking with the smallest practicable control machine, and with a minimum number of relays.

THE SOLUTION: Installation of a "Union" Unit-Lever Relay Interlocking System with a compact control machine employing only 32 miniature C.T.C.-type levers with an integral miniature track model. Track occupancy is indicated by lights mounted in the track model and switch and signal positions are fully indicated. Complete interlocking protection is provided by circuit locking.

RESULTS: Efficient and safe handling of 38 through passenger trains, 66 suburban trains and 70 to 75 switching and transfer movements . . . Approximately 200 line-ups are established daily without delay to trains which at times are spaced on 2-minute headways.

"Union" engineers are qualified by long experience with the different forms of interlocking control to recommend the correct installation to meet local operating requirements. Their services as consultants are available without obligation to you.





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RAILWAY AGE

Efficiency FOR VICTORY

Government Creation of Labor Monopolies

The coal strike is but one extreme illustration of the fact that there has been established in this country a new and vitally important form of inequality. If the mine operators had prepared concertedly to close the mines, the government would have secured an injunction which they could not have disobeyed without going to jail. When during World War I John L. Lewis and his fellow labor leaders threatened a coal strike, President Wilson's attorney-general prevented it by securing an injunction. But when during this war Lewis and his fellow labor leaders have not only threatened to close the mines, but have actually closed them, there has been no legal preventive or punitive action.

This new inequality between labor unions and business has been established as one of the so-called "social gains." But a social gain is one made for society. The gain made for society by government policies of inequality which have resulted in time of war in extensive and even nation-wide cessations of imperatively needed production that employers would have been jailed for causing is difficult to discern.

The same policies of inequality almost resulted in a nation-wide railroad strike in 1941 just before Pearl Harbor. The President appointed an emergency board under the Railway Labor Act which, after full hearings, reported to him recommendations for advances in wages. If railway managers had caused danger of a strike by exercising their legal right to reject the recommendations, the President probably would have seized the railways, as he has the coal mines. He did seize the Toledo, Peoria & Western in 1942 when President McNear exercised the same legal right to reject arbitration that the railway labor unions had exercised on a national scale a few months before. But when in 1941, after having nationally rejected arbitration, the railway labor unions also rejected the recommendations of his emergency board and ordered a strike, the President intervened and caused advances in wages exceeding those which his own board maintained to the last would be reasonable and adequate.

Public sentiment is rightly almost 100 per cent against Lewis and his fellow labor leaders for refusing to join with the mine operators in submitting their controversy to the War Labor Board. But whose is the responsibility for government policies that have given labor unions a monopolistic economic power denied to employers, and which encourage them to believe they can use this monopoly power almost without limit against employers, and now even against the government in time of war?

The foundation of an orderly democratic society is equality of law. Our laws formerly prohibited monopoly practices by anybody excepting strictly regulated natural monopolies. This administration has started many court proceedings against business for monopoly practices. But labor unions have been given monopoly power of dictating to business and the public such as business never had of dictating to anybody. And why should not this power be used to defy and dictate to government when for a decade the trend and apparent objective have been control and use of government by a minority class to exploit everybody else?

John Lewis has unintentionally rendered a service. He has helped awaken people to a realization that unregulated and uncon-

trolled labor monopolies are as selfish and unsocial as unregulated and uncontrolled business monopolies, and much more dangerous because of their greater economic and political power. And he has thus greatly stimulated an already rapidly rising public demand for abolition of government policies of inequality which have been increasingly subjecting the public to ruthless dictation by the irresponsible leadership of labor monopolies.

Too Many "Experts"

It is an observable fact that the term "expert"—once indicating in the person to whom it was applied the mastery of some field of activity or knowledge—now often suggests, negatively, that the bearer of this term is ignorant of everything except his specialty; and, often, that his competence in his limited field is rather asserted than recognized.

The English language affords many parallel examples of the degradation of the meaning of words; and *how* the degradation occurs is an easy inference. For instance, the term "knave" once meant simply a boy-servant—not a cunning rascal, which is the image it now conveys. Seemingly, most serving boys were such scalawags that rascality became the dominant concept which the appellation induced. Thereafter, the transition of "knave" into a synonym for blackguard was easy.

There is certainly nothing scandalous—but quite the contrary—in the strict meaning of the term "expert," namely, "having facility for operation or performance from practice." There is nothing in such a definition which suggests that the person to whom it is applied should, necessarily, be ignorant or unmindful of the relationship of his specialty to the rest of life. There is nothing in the term which suggests that reading or writing a few reports about a subject in which the "expert" has had no practice would qualify him for such distinction.

And yet consider the types of people who are called "experts" today and who, because of their possession of that title, expect to have their opinions looked upon with respect. Take the "experts" of the National Resources Planning Board, for example. The chiefest of them is by profession a landscape architect. He could, on the basis of his practical experience, probably be trusted to plant the evergreens in a cemetery with some degree of artistic discrimination—but what practical experience has such a man which makes him a genuine expert, either of economic resources or the planning thereof? The only men in this country who have had any experience, qualifying them as genuine experts in economic planning, are the originators and developers of large business and industrial enterprises. Self-styled "experts" in economic planning without such qualifications are merely claimants of respect which they cannot command, and by the misapplication of this term to them, the appellation itself is losing its original honorable meaning and is becoming one of obloquy.

In another respect also, many present-day "experts" are debasing the value of this once-respected attribution—that is in their insistence on their specialty as an end in itself. This shortcoming is perhaps best identified by the time-honored wheeze: "The operation was a success, but the patient died." This is precisely the failing of too many "experts" in every field of human endeavor: The "expert" surgeon forgets that his job is to save human life by skillful appendectomy—not the performance of such operations merely to demonstrate his dexterity.

It is the burden of bigness that there must be specialization—and that the tendency of the specialist is, too frequently, to forget that the activity of his limited realm is worthless except as it contributes to the advancement of the whole enterprise of which it is a subordinate part. For example, no one railroad department is of any value except to the degree that it contributes to the economic functioning of the company as a whole. Thus, the engineering intelligence which cuts to the minimum of safety the maintenance of a branch line on which traffic is drying up is of definitely superior order to that which would continue to spend money to maintain the line to standards justifiable only on purely technological considerations.

The need for genuine experts — that is, men with knowledge based on experience, who, because they are experienced, are wise enough to subordinate the parts to the whole—was never greater than it is today. And never before have we had so many "experts" of the wrong kind in posts of unmerited distinction.

Government as Manager Versus Private Management

There are some striking contrasts between the way the government treated itself as the manager of the railways in 1918, the second year of our participation in World War I, and the way in which it is treating private management of them in 1943, the second year of our participation in World War II.

For example: In the first quarter of 1918, under government operation, there was an *increase* of 3.4 per cent in freight cars in service and a *decline* of 2.6 per cent in freight traffic handled. And just twenty-five years ago, on May 10, 1918, the *Railway Age* published the news that "The United States Railroad Administration has announced the placing of orders for 100,000 freight cars and 1,025 locomotives." It acquired rail and other materials in proportion.

There was an increase of 4 per cent in freight cars in the first quarter of 1943, and an *increase* of 27 per cent in freight traffic handled. But the War Production Board authorized materials for only 20,000 freight cars and 100 switching locomotives in the first half, and for only 286 road locomotives in the first two-thirds of 1943. And in its issue of May 1, 1943, the *Railway Age*

quoted from an address by H. G. Batcheller, director of the board's steel division, in which he announced that the railroads' allotment of steel had been reduced 40 per cent for the third quarter of this year, and added: "The railroads are going to be in much greater trouble. Their equipment is wearing out. They are being pushed far beyond the limits of performance which can reasonably be expected. They will have to get along."

The government, as manager of the railways, also treated itself very differently as regards rates during the last war from the way in which it is treating private management during this war. In May, 1918, the Railroad Administration made advances of $1,000 million a year in freight and passenger rates. As a result, in the entire year 1918 average revenue per ton-mile was 19 per cent higher than in 1917 and average revenue per passenger-mile 16 per cent higher. In 1943 the Interstate Commerce Commission has ordered reductions of $300 million a year in freight rates—although average revenue per ton-mile actually was less in 1942 than in 1941.

Government as manager was also much better to itself as regards taxes during the last war than it is being to private management during this war. Because it was operating the railways, the federal government held down the increase in railway taxes, federal, state and local, to less than $10 million in 1918. But the increase in railway taxes—principally federal—under private operation in 1942 was *$655 million.*

Here are some other contrasts between results of government management and private management:

Freight traffic handled increased less than 3 per cent in the entire year 1918 and passenger traffic only 8 per cent. Freight traffic handled increased 34½ per cent in 1942 and passenger traffic 83 per cent. And yet operating expenses increased *40 per cent* in 1918, and only 26 per cent in 1942.

Gross earnings increased 22 per cent in 1918, principally because of the advances in rates. Gross earnings increased 40 per cent in 1942 because of the much greater increase in traffic handled. Hence, net earnings from operation (before taxes) *declined* 25 per cent in 1918, but *increased* 74 per cent in 1942. And under government operation in 1918, in spite of the large advances in rates and the trifling increase in taxes, net operating income *after taxes* declined 32 per cent; whereas in 1942 under private operation, in spite of the huge increase in taxes, net operating income *after taxes* increased 48½ per cent.

Under government operation in both 1918 and 1919, because of the decline in net operating income, the railways incurred big deficits that the taxpayers had to pay. After having paid *six times* as much taxes in 1942 as in 1918, their freight rates have been reduced in 1943 on the theory that, having made two and a half times as much net operating income *after taxes* in 1942 as under government operation in 1918, they had made too much, and might make too much in 1943.

The government was a good manager for itself during the last war—but not nearly as good for passengers, shippers and taxpayers as private management is during this war.

Planning—to Dissipate America's Substance

In Part II of its report for 1943, just issued, the National Resources Planning Board remarks upon the change in "capital formation" which has resulted from the war. Private gross capital formation in 1942, it says, was only $10 billion, as compared with $19 billion in 1941 and more than $20 billion in 1929, adding that "most of the components of gross capital formation" have now been transferred from private to public account.

By way of illustrating what this means, the Board points out that housing is now war housing, plants are war plants, exports are lend-lease, and inventories are either stockpiles or war goods in process. True enough, but housing, plants, stockpiles, et cetera, which have been created for war purposes are not capital formation in any correct sense, except to the extent that they or portions of them can be adapted to or salvaged for economic use hereafter. Much war housing, as and where it stands, will prove useless in peace; many war plants will have but doubtful scrap value; little of lend-lease exports will ever come back as imports. It is not so much that capital formation has been transferred from private to public account as that, what were once components of private capital formation have been transformed into components of public capital destruction. This was and is inescapable. War is the great destroyer of economic goods.

It was inescapable, but we need to be on guard against a careless inference that capital formation has been only transferred or that the high level of national production means that proportionate capital formation accompanies it. The distinction between what "public account" is doing with so-called capital formation and what private enterprise management does with it in ordinary times is important, and particularly so in relation to what the Board says about the aims of forward planning in this passage:

> "We have got to provide through planning the means for sustaining the American concept of living, for full employment, security and the pursuit of happiness, and for giving a reasonable assurance to our people and to other peoples that the Four Freedoms and the new Bill of Rights will be implemented and made real for all persons everywhere in the world."

If the components of capital formation in the United States are to be put to work implementing and making real for two billion persons everywhere the Four Freedoms and the new Bill of Rights (which the N. R. P. B. itself has written) the results may be left to anyone's staggered imagination. How completely free the Board is of any governing sense of reality is revealed by its attribution of shortages of steel, rubber, aluminum and transport facilities to "lack of effective planning," as though it ever had been the wish of the nation to stand equipped for war on three foreign continents.

The House of Representatives was right in denying the N. R. P. B. an appropriation to prolong its existence. It is not only incapable of any real planning; it is a dangerous focus of collectivist infection; it yearns for the opportunity to dissipate the substance of the American people throughout the world.

—From the Wall Street Journal

Diesel Locomotives of the Union Pacific and Chicago & North Western, Over the Inspection and Repair Pits of the Latter Road at Chicago

Many Factors Influence Design of Diesel Repair Facilities*

Discussion of general requirements for such installations as to layout, tools and equipment, inspection pits, wheel-changing devices, building construction and ventilation

WITH the development and adaptation of the Diesel engine for switching and high-speed passenger trains, and, more recently, for freight service, the adequate maintenance and repair of Diesel locomotives has presented new problems to the railways, which demand attention to secure the maximum availability of this type of power. Important at any time from the standpoint of operating efficiency, the adequacy of maintenance and repair facilities has become of increasing importance with the growing war traffic, to insure the maximum serviceability of this class of power without failures that would impede the movement of this traffic.

Types of Repairs

To understand better the character and extent of the facilities necessary for the repair of Diesel locomotives, a general review of the character and type of repairs required by this type of power is essential. While they are common in a number of respects to those essential for steam power, they diverge from the latter in some ways and are entirely different in still other respects. In the first place, while many classes of steam locomotive repairs are carried out on a specific time or mileage basis, and require movement into an enginehouse daily and shopping at stated intervals, those for Diesel locomotives are more generally on a "continuous" or "progressive" basis, en route or at terminals.

Heavy repairs, equivalent to the back-shop repairs of steam locomotives, are made only at intervals of several years when complete overhauling of the engines and special attention to the crank shaft may become necessary or advisable. Barring derailments or collisions which might damage the engines, experience has shown that, with proper operation and attention to lubrication, complete engine overhauls need not be effected under less than a million or more road miles of service. It is sometimes necessary to remove the Diesel engine from the locomotive engine room, but even then the entire locomotive need not be tied up for any period of time since some roads maintain a spare engine unit which can be substituted for the engine unit undergoing general overhauling. In any event, in even the largest Diesel units involving two Diesel engines per unit, only two engines at most are tied up when one is undergoing overhauling. The remainder of the units forming the locomotive (one, two or three, as the case may be) can continue in service either alone or supplemented by an auxiliary unit borrowed from some other service.

* From a report prepared by a subcommittee of the Committee on Buildings of the American Railway Engineering Association, of which N. D. Howard, engineering editor of the *Railway Age*, was chairman.

Practically all other types of repairs on Diesel locomotives can be classed as running repairs—that is, repairs that can be completed en route or within layover periods at terminal points, usually by removing the worn or defective part and cleaning or servicing it within the shop facilities provided, without delaying or otherwise affecting the use of the locomotive. The principal classes of such repairs include the following:

Removing, turning and replacing wheels.
Turning up axles.
Mounting wheels on axles.
Mounting gears on axles.
Removing and applying traction motors.
Matching up traction pinion gears and ring gears.
Welding such parts as are necessary and permissible.
Reconditioning cylinder heads.
Reconditioning pistons.
Reconditioning cylinder liners.
Reconditioning main and connecting rod bearings.
Reconditioning cam shaft bearings.
Renewing gear drives having excessive wear.
Reconditioning engine blowers.
Reconditioning lubricating oil and water pumps.
Repairing and rebuilding steam heating generators.
Replacing main generators, traction motors and fuel injectors.
Minor repairs to locomotive's superstructure.
Painting exterior and interior of locomotives.
Repairing fuel and water tanks.
Repairing and replacing radiators.
Repairing and replacing lubricating oil filters and coolers.
Servicing air filters.
Overhauling and repairing fuel pump motors.
Overhauling and repairing steam generator pumps and ignition motors.

All of the foregoing are classed as running repairs because even the most serious of them involves only the replacement of a unit by a new or repaired unit to restore the locomotive to road service, and most of these replacement operations can be effected within the relatively short layover periods at terminals or turn-around points. Under this system, spare parts are essential for the replacement of wheels, trucks, traction motors, gears, blowers, filters, cylinder heads, pistons, cylinder liners, etc., but the supplying of such spare parts allows repairs to be made on all parts independent of the locomotive. This is one of the reasons for the high rate of availability of Diesel power.

Other items of Diesel locomotive maintenance that may be included in this group are the replacement of fuel injectors and main and auxiliary generators. Here again all of the actual repair work, which in the case of generators may require many shop hours, is done without interfering in any way with the use of the Diesel locomotives as a whole, beyond the time necessary to replace the part or unit affected.

Factors to Be Considered

Since the extension of Diesel locomotive power to the railroads generally in the last eight or nine years, each road has developed repair facilities to serve the anticipated requirements of the number of units involved, and has located them at the most strategic points from the standpoint of efficiency to locomotive utilization. As a result, the present facilities on the railroads, while fundamentally the same in many respects, are widely different in many other respects. Some of the more important factors that must be taken into consideration in the provision of Diesel repair facilities at any particular point include the number and type of units to be maintained; the character and extent of the repairs to be made; the layover or available shopping time of the equipment; the availability of existing track, terminal and steam locomotive repair facilities that can be adapted to Diesel-repair work; the availability of space for the development of exclusive Diesel repair facilities, in whole or in part; the relative certainty or uncertainty of the permanence of the repair point; and the ability or willingness of the particular road to provide the best and most efficient repair facilities.

In general, the present Diesel locomotive repair facilities of the railroads can be divided into two general classifications: Main or heavy shopping points, and running repair points—the former generally being equipped to handle, in conjunction with certain steam repair facilities, all classes of Diesel locomotive repairs, both heavy and light, while the latter are generally equipped only for replacement operations and minor repairs, the parts removed at these points being sent to the heavy repair points for overhauling or reconditioning.

Heavy Repair Facilities

Extensive as has been the provision of repair facilities at main shopping points on at least a few roads, no road at present, operating both steam and Diesel power, has provided within its Diesel maintenance facilities equip-

A Diesel Engine of One of the North Western's "400" Train Locomotives Undergoing Complete Overhauling in the Steam Locomotive Erecting Shop at Chicago, in a Special Section Set Aside for This Purpose

ment for handling all classes of repairs to the locomotive running gear, superstructure, and certain locomotive parts. For example, in only one or two instances have wheel lathes been provided within the Diesel shop facilities, most roads relying upon the equipment already available in the steam locomotive shops for this class of work. Likewise, any major superstructure work that may be required as the result of an accident is usually carried out in an existing steam locomotive back shop, frequently located within the same terminal area as the Diesel shop facilities. Again, few if any roads are as yet equipped to handle major repairs and the general overhauling of main and auxiliary generators and traction motors within their Diesel shops, although several roads contemplate, when conditions permit, the construction of adequate facilities at their main Diesel shops for all classes of generator and traction work. Just now all work of this character is generally referred back to the builder of the equipment on a basis which makes available a duplicate unit to replace the unit taken out of service.

Few Major Fixed Facilities Required

The experience in Diesel locomotive maintenance on various roads indicates that even at heavy repair points, few major fixed facilities are required, especially where the number of units to be maintained is limited. Fundamental among the requirements are one or more pit-equipped tracks to hold the locomotives during repair periods; means for changing individual pairs of wheels, with their motors, and complete trucks; an overhead crane or cranes of suitable capacity to lift auxiliary units and complete Diesel engines out of their cabs; a suitable area for overhauling Diesel engines; an adequate machine shop area equipped with the necessary hand tools and machine tools to carry out the repairs necessary; adequate bench space and tool cabinets; a separate Diesel storeroom; an air-filter cleaning room; an office and records room; and toilet, wash and locker-room facilities.

It is generally accepted that the pit tracks involved in the repair facilities should be housed to afford protection to the various work operations, and yet the nature and extent of this housing appear to be highly flexible, there being only a few instances where roads have constructed entirely new buildings for this purpose. More generally than not, use has been made of existing buildings, usually sections of enginehouses and shops, adapting the areas taken over to the specific classes of work to be carried out. While the utilization of existing buildings may offer immediate economies over new construction, and may even be necessary under existing conditions restricting building construction, and furthermore, while many of these adapted facilities serve quite adequately, there is general recognition of the fact that new facilities laid out in accordance with the specific requirements of Diesel locomotive repairs tend toward more efficient maintenance and lower over-all costs.

Type of Construction

In such new Diesel shop buildings as have been built, the layout is on the longitudinal basis, with parallel pit tracks, suitably spaced to permit sizable working areas between them. The shop walls are of brick, sheet metal or other suitable materials, invariably with large areas of sash, and have a structural steel frame to support a necessary crane runway. Like the enclosure wall, the roof structure, flat or pitched, and with suitable skylights, is of materials which seem most advisable in the light of prevailing conditions, or previously adopted standards for similar construction.

For other features of Diesel shop areas, such as floors, heating, lighting, etc., the requirements appear to be similar to those for shops for the maintenance of steam power, except that more adequate pit illumination is generally desirable, and in cold climates pit heating of the blower type is advantageous to hasten the melting of snow and ice about the underframe and running gear and thus permit inspection and servicing operations. There is some difference of opinion as to the permissible depth of inspection pits, some maintaining that the depth should be restricted to permit inspection and repairs without the constant moving of portable platforms or racks, while others prefer a deeper pit to permit the more ready movement of workmen beneath the units in passing from one end to the other. In all cases, however, it is agreed that the pits should extend the full length of the power units to be repaired, and should be well drained.

The overhead traveling crane required in all Diesel shops for heavy repairs should have a longitudinal travel equal to at least the length of the track pits, and a transverse travel over the specific tracks and working areas to be served. This crane should have adequate capacity for lifting out and replacing the heaviest Diesel engines to be overhauled, and some roads have found it expedient to supplement the heavy crane hook with a high-speed hook of lighter capacity for the removal and replacement of engine cabs and auxiliary equipment. In most cases, crane capacities of 10 to 40 tons have proved adequate for all classes of overhead work.

Changing Wheels and Trucks

There appears to be a considerable difference of opinion with regard to the most desirable type of facility to permit the changing of wheels and complete trucks. Among the various facilities suitable for this class of work are the heavy-duty overhead traveling crane, the drop table, the pillar-type floor hoist, and the truck transfer table. No road investigated has installed an overhead crane of the capacity necessary for this class of work, primarily because of the heavy cost involved in the runway and structural framework required. This type of equipment is used only where it is readily available in existing steam locomotive shops.

At least one road has installed a pillar-type floor hoist at its principal Diesel shop to permit truck replacement work, and at least one other road has available within the shop where its Diesel work is done, a drop table of adequate size and capacity to handle all but the articulated trucks of certain of its Diesel locomotives. The most common facility being employed for truck removal and replacement work is the truck transfer table, in conjunction with the use of portable hydraulic jacks to lift the locomotive frame clear of the truck to be replaced. This latter arrangement obstructs a greater floor area than the others mentioned, but is used with considerable success by several roads and is more economical to install.

With few exceptions, no existing Diesel shops are equipped to turn wheels and axles or to mount wheels and gears on axles, work of this nature being done in wheel shops provided originally for steam locomotive work. There is one outstanding exception to this general rule, where the Diesel shop is not only equipped

with a wheel lathe, but also with a wheel grinder, used to increase the precision of the finished lathe work, a precision which is thought desirable on this road in the high-speed wheels of Diesel passenger equipment.

Roads that do not have specially designed shops for making heavy Diesel repairs, especially for removing and overhauling engine units, usually do this work in a section set aside in an existing erecting shop, where adequate crane capacity and space are available.

The various Diesel shops in use on the railways at present for making what are classified as running repairs differ from the heavy repair shops in few respects as to the character of the facilities provided, the major difference being in the extent of the facilities—tracks, pits, hoisting equipment and tool layout. Since running repairs do not include the removal and replacement of complete Diesel engines, none of these shops is equipped with overhead cranes adequate for this type of work. Other than this, the facilities necessary at running repair points are more or less similar in character to those at heavy repair points. In fact, while truck and wheel work are seldom, if ever, done at running repair points, a number of shops at these points are equipped with truck transfer tables and portable hydraulic jacks to permit the changing of wheels and trucks in emergency, the wheels and trucks being shipped to other points for repair or reconditioning.

While the nature of the heaviest Diesel repairs requires that the work be done under cover to afford protection from the elements, this is not true with respect to the making of running repairs, except in the colder sections of the country. Thus, the repair tracks at many points are not housed, it being the practice at these points to provide buildings only for housing a repair room or shop, a tool room, a Diesel parts storeroom, toilet and locker facilities, etc., most of these auxiliary building units being relatively small and ranging from car bodies to equivalent areas taken over in new or existing adjacent buildings.

At a few running repair points, the pit tracks or tracks have been housed along with a wheel and truck transfer table, and a work bench and cupboard space adjacent to the track areas. At other points, effective use is being made of sections of enginehouses, an adequate number of stalls having been turned over for exclusive Diesel work, and frequently walled off completely from the part of the building in which steam power is serviced.

Seal Off Diesel Shop Areas

It seems highly desirable that the Diesel repair area be sealed off tightly from the steam locomotive area to protect the Diesel locomotives, and more particularly, their engines, from the smoke and soot-laden air that frequently prevails within the steam locomotive area, and also to minimize condensation, which might cause serious damage to the electrical equipment, especially where there is any carelessness about steam leaks in the enginehouse. At least one road considers this matter of sufficient importance to provide filtered air circulation within the section of an existing enginehouse that was turned over for Diesel inspection and running repairs. In this case, a five-stall section of the house is completely walled off from the larger steam section. Furthermore, within the Diesel shop area, a new tile partition, ten feet inside of the existing outer circle wall, separates the Diesel repair tracks from the area immediately adjacent to the outer circle wall which is used for trucking to and from the enginehouse as a whole.

Air for the Diesel shop area enters through two large louvers in the outer circle wall, passes through a series of five rack-type removable and cleanable filters installed in the partition wall, and is pulled out the front of the area by means of two large suction fans, with a combined capacity that is sufficient to effect a complete air change every ten minutes. All of the enginehouse doors leading to the Diesel repair tracks, as well as a single trucking door leading into the shop area from the runway adjacent to the outer circle wall, are weatherstripped and are opened only as required, even during the summer, to carry out operations.

Steps and Platforms

At most running repair points, with their limited hoisting equipment, it is generally considered desirable to simplify the work in the locomotive engine rooms by providing ready access to the catwalks and doorways of the locomotives. This is being accomplished in some cases by portable steps, and in others by portable or permanent platforms at engine-floor level. Where steps alone are considered sufficient, these are usually mounted on wheels so that they can be located at the points desired with minimum effort, and without permanently obstructing the floor area.

Where longitudinal working areas along the sides of locomotives at engine-floor level are considered desirable, several types of platforms are being employed. One of these types, with steps at its ends, is mounted on wheels and can be pushed into place when desired. Another type, employed extensively by at least one road in enginehouse areas adapted to Diesel work, consists of a continuous high-level platform around the outer wall of the enginehouse which is reached by ramps at the ends with radial sections at the same level extending for various distances between the enginehouse tracks. Where such high-level platforms have been installed, work benches and tool cabinets have been provided along the outer circle wall.

Still another expedient to provide an engine-floor working level along the sides of locomotives, primarily in the case of switching locomotives, is the use of demountable platforms which can be hung directly on the sides of the locomotives, and subsequently removed upon completion of the work. These demountable platforms involve steel brackets which are hung individually on the sides of the locomotive frame, and a series of plank-deck sections which can be readily installed on and removed from these brackets by two men.

At all running repair points, a small repair shop, a Diesel parts storeroom, a tool room and certain other auxiliary areas are desirable, if not essential, but in most cases these facilities require a relatively small area.

Points of both heavy and running repairs for Diesel locomotives are invariably equipped to make lubrication oil changes or to replenish crank-case supplies. Such facilities may consist of no more than the drums in which the oil is received, fitted with hand pumps, or they may embrace complete pressure supply systems, piping the oil directly to points along the repair tracks. At least one road also has a system for collecting worn oil from crankcases, and piping it to a central point for reclamation.

[The remainder of the report was devoted to a description of the facilities for repairing Diesel locomotives that have been provided by the Atchison, Topeka & Santa Fe, the Chicago, Rock Island & Pacific, and the Chicago & North Western.—Ed.]

O. W. I. Reports on Transportation

Agency says "there is no talk" of government operation, as it records "gigantic job" of good freight service

THE portion of the detailed transportation report of the Office of War Information which dealt with passenger service was published, practically *in extenso,* in our last week's issue. Hereinafter is presented, also with very little emendation, the portion of the report covering freight service. Segments of the report having to do with agencies of transportation other than railroads are also included in abbreviated form. The report (taking up where we left off in our May 1 issue, page 873) goes on to say:

"Gigantic Job" With Meager Equipment Supply

With intercoastal shipping through the Panama Canal practically non-existent except for military and naval movements, with coastwise shipping, especially along the Atlantic, likewise at a low ebb, and with ports handling quantities of Army and Lend-Lease exports which dwarf anything in the country's history, the railroads are performing, with few major congestions, a gigantic job of freight transportation. In 1942 they carried 638,000,000,000 ton-miles of freight, an increase of a third over 1941, which had been the peak year, and the figure cannot help but rise in 1943. As in the case of passenger equipment, railroad freight equipment is considerably down from the last war's figures: there were one-quarter fewer freight cars in existence in 1942 than in 1918. The construction of 20,000 freight cars and 386 locomotives has been licensed by the War Production Board for the first eight months of 1943, and more will almost certainly be built later.

During the last war, freight congestion on the railroads, particularly at and behind ports, became so great that war plants closed for lack of coal, fuel riots took place, goods spoiled on piers, and freight cars containing cargo needed for ships had to be lifted out of clogged yards by crane. This was due in large part to the facts that the railroads lacked any central agency among themselves (such as is now provided by the Car Service Division of the Association of American Railroads, which arranges for pooling of freight cars and other equipment), and that there was little cooperation between carrier and shipper, goods being routed to ports without any assurance that ship space would be ready. After the government took the railroads over in December, 1917, conditions improved. But at no time were there so few prolonged congestions as at present. And at no time during the last war did such an immense volume of freight move westward as well as eastward across the country as today.

At New York, although the export freight movement is twice what it was during the last war, the port is not being used up to capacity, reflecting the almost total loss of the great prewar import tonnage and the disappearance of coast-wise traffic. Exports from most other ports, especially those on the Pacific Coast, are many times what they were in 1941, and harbor, track, yard, storage and labor facilities are strained. This great volume of freight, especially the unaccustomed westward movement (one-third of the total), is kept fluid with the aid of an elaborate Traffic Channels System maintained by the ODT, according to which 70 major railroads telegraph to Washington daily operating data which indicate bottlenecks or threatened bottlenecks—so far, usually in time to permit rerouting or other action to prevent serious jams.

Clogging at ports is kept to a minimum by the operations of a Transportation Control Committee, made up of one representative each (identity kept secret) of the Army, Navy, British Ministry of War Transportation, War Shipping Administration and ODT. This group, formed after a congestion of export freight in the port of Philadelphia early last year, meets in daily session to determine quotas for the various federal agencis (including the Army and Navy) engaged in shipping abroad, and to assure, through the War Shipping Administration, that ship space is waiting so that perishable goods are not held on piers and that the limited storage space at ports is not overrun. Government agencies maintain a large number of storage warehouses throughout the country, especially in the areas behind ports, so that goods can quickly be moved to ships as desired. No freight may move toward a port without a permit, and by an intricate system of checks and reports the exact location of any port-bound freight can be determined in Washington within a hour and a half, and diverted to inland storage points if ship space or port storage space becomes unavailable. Daily and weekly reports are received in Washington from twelve ports, as to the amounts of freight, cargo space and storage space on hand.

There is no talk, at the present time, of the government assuming ownership and operation of the railroads. (The government does operate 230 miles of railroad—the Toledo, Peoria & Western, taken over in March, 1942, because a labor dispute threatened to tie up interstate commerce). The Army, Lend-Lease and other agencies agree that the control system is working "reasonably well," and it is generally agreed that desire to avoid government controls has acted as a stimulus to the railroads to maintain a high degree of cooperation.

O. W. I. Photo

Average freight-car loads are considerably heavier than before the war, especially in the case of less-than-carload freight, which has almost doubled from 5.3 tons in 1941 to a required 10 tons now. The percentage of bad-order freight cars has been reduced from an average 5.5 per cent in 1941 to 3.4 per cent. There has been a 36 per cent reduction in locomotives awaiting repair. Shippers have been encouraged to send less-than-carload freight west and south in the refrigerator cars which bring citrus fruits and other perishables east and north from California and Florida, and which have in the past returned empty. Restrictions have been placed on the movement of certain much cross-hauled commodities, such as caustic soda and molasses, which move in tank cars that are needed for ethyl alcohol and oil. Railroad efficiency has unquestionably been increased in innumerable particulars, making possible the overall performance of the job, and the increase must be maintained if the job is to be performed for the duration.

Along with the movement of war exports to ports, the two greatest war-time railroad freight hauls are those of oil and coal.

Oil

Before the diversion of oil tankers to foreign service and the beginning of submarine sinkings, one tanker used to leave the Gulf ports almost every hour with oil for the seventeen eastern states and the District of Columbia, now known as District I. One million five hundred thousand barrels of oil a day were delivered to that region by water. Customarily only five or six thousand barrels a day were delivered by rail, virtually all of it special products such as asphalt, liquified petroleum gases, and wax. Now, east-coast tankers are few (the exact number of those in service is a war secret), and the railroads have taken over eastern oil deliveries in a larger measure than was believed possible—even by themselves—when the emergency first arose. Nobody in the country needs to be reminded that Eastern oil stocks are far from being what they used to be. There were plenty of uncomfortable oil-heated homes this winter. But although the situation still continues tight, the emergency has so far been met more successfully than many thought possible.

At the present time, over 800,000 barrels of oil a day are entering District I by tank car, and the figure is rising. The following is the delivery picture of oil of District I in January, 1943:

800,000 barrels a day by rail (most of it by rail all the way from the oilfields; some, part of the way by pipeline.)
168,350 barrels a day by pipeline.
70,000 barrels a day by barge. (There were no Great Lake oil deliveries in January, the season having ended.)

In February the first leg of the 24-inch War Emergency Pipeline (the "Big Inch") from Longview, Texas, was opened at Norris City, Illinois, delivering 60,000 barrels a day which are transshipped eastwar by tank car, replacing longer tank car and barge deliveries. As new pumps and tanks are installed this amount will increase to 300,000 barrels a day, and by next summer the line will be extended as far as New York and Philadelphia, making direct pipeline deliveries to these cities. Work on a second big pipeline to the East has begun. Because of increasing military demands, the additional oil entering the East by pipeline will do little to ease the oil shortage as it is felt by the civilian consumer.

Approximately 70,000 tank cars, many of them diverted from other sections of the country, are now in the Eastern oil service. Of these, 1500 are new cars, for special oils, built last year. No further construction of tank cars has been authorized by WPB. Most tank cars are old—18 or 19 years, on the average, but improved maintenance is keeping them in better condition than they were a year ago.

In the early stages of the movement, tank cars moved in ordinary freight trains, making it necessary to send the trains to classification yards for sorting; and even when whole trains were composed of tank cars they were frequently marked for so many separate consignees and destinations that delivery was greatly delayed. Now tank cars move chiefly in solid trains—some made up at the point of origin, other put together at concentration points in the Texas, Oklahoma and Gulf areas—which operate on fixed through routes and on fixed schedules directed by the ODT. Fifty railroads and 66 routes are involved in the eastward oil movement. On some railroads, motive power and terrain keep tank-ar trains below the 60-65 car standard set by ODT, but on other lines solid trains of 90 to 100 tank cars are not unusual. The chief hitch in the Eastern oil delivery has come at the unloading points, where facilities have frequently been inadequate. Irregular unloading also makes for difficulty or impossibility in assemblying solid trains of empty tank cars for the return trip. Construction of additional unloading facilities at about twenty Eastern points will be underwriten by the Defense Plant Corporation, a subsidiary of the Reconstruction Finance Corporation.

Using Trucks for Short Hauls

Through its requirement of permits for all tank car movements under 200 miles, the ODT has diverted enough short-haul movements to tank trucks to release 14,000 tank cars for longer hauls. After almost a year of this diversion, the ODT late in 1942 concluded that few if any more tank cars could be released unless more tank trucks were made available. Accordingly, WPB approved the construction of 1,092 tank trucks, trailers, and semi-trailers for this purpose. By March most of these new units had been constructed, allocated, and put into service where they could do the most to release more tank cars. Half a million steel drums loaded in box cars are carrying to New England about 20,000 barrels of oil per day and are in continuous use. Container cars formerly used to haul cement and now converted into oil carriers, and box cars lined with canvas treated with a rubber substitute, are other devices being brought into play.

In the Middle West, from which 35,000 tank cars have been diverted to Eastern use, truck deliveries have been substituted on a large scale. A program of joint-action schemes to be adopted by local distributors of petroleum and petroleum products here and elsewhere in the country has as yet advanced little beyond the conversational stage. There is still considerable unwillingness on the part of members of the petroleum industry—as indeed of many another industry—to pool deliveries to each other's customers. Oil transportation by Great Lakes tanker and by barge on inland waterways is important. An average of 127,000 barrels a day were carried by these means at the peak of 1942 and the figure is expected to rise above 200,000 by mid-1943. A number of steel barges, designed for dry cargo, have been converted into oil carriers, and additional wooden barges, towboats and tugboats are being constructed. Except for the heaviest grades of oil, transportation by wooden barge is hazardous. Despite claims that a barge canal across northern Florida would greatly relieve the oil shortage in the East, officials of government agencies concerned are on record that such a project could not be completed in less than two years' time. If such a canal were already in existence it would help, but under present conditions the construction of additional pipe-lines (particularly considering their small manpower requirements for operation), the improvement of solid train movements, and increase of the barge fleet are generally thought to be the most practical steps in adding to oil deliveries.

Coal

Rationing of coal—which, unlike oil, is not consumed to any extent for pleasure purposes—is not expected to be necessary in any part of the country unless strikes or severe loss of labor should interfere with production and delivery. Despite the existence of local delivery shortages, transportation tie-ups have not cut off coal supplies, as occurred in the last war. Exclusive of supplies in the hands of individual consumers, 75,000,000 tons of bituminous coal—45 days' supply—are at present in storage at destination points throughout the country, anthracite being somewhat less generally available. Although the railroads express certain fears of the increased coal transportation made necessary by the new six-day work week at the mines, where storage facilities are limited, they expect to be able to fill the 1943 industrial and domestic requirements for both bituminous and anthracite. These are 25,000,000 tons higher for bituminous alone than in 1942, due to increased conversion from oil, expansion of the steel and coke industries, increased demand for coal-generated power,

O. W. I. Photo

Rail and Water Transportation in Team Play at Allouez, Wis.

and the general increased tempo of war industries. This 1943 coal demand represents an increase of 4 per cent over 1942, but will entail a disproportionate increase of rail movement for delivery because of the great length of many hauls. Americans are being urged, both individual consumers and dealers, to take deliveries of coal during the spring and summer months: out-of-season delivery is the greatest factor permitting increased performance by a limited transportation system. There are no unused coal mines in the country at the present time, though in some cases manpower shortages make exploitation less than it might be.

Somewhat less than in the case of oil, but still to a striking extent, the railroads have assumed the major burden of coal deliveries to the Northeast. Increased industrial demand and the diversion and sinking of a number of colliers have changed the picture. New England, which in 1939 received three-quarters of its bituminous coal by collier, is now receiving over half by rail, and even its traditionally small proportion of water-borne anthracite has been diverted to the railroads almost entirely. New York, which is more easily served by rail than is New England now receives no collier deliveries from Hampton Roads; the boats sail directly to New England ports. Some of these, however, too small to handle colliers, are served by barge from New York.

Elsewhere in the country, too, the coal transportation picture has undergone wartime changes. Eastern Kansas and Western Missouri, which are in themselves coal-mining areas and usually self-sufficient, experienced a brief coal shortage during the past season. This was caused by a WPB order stopping the flow of natural gas into the region from adjoining areas unsupplied with coal. Emergency rail deliveries of coal had to be made from fields in western Kentucky and Illinois.

Oregon and Washington, usually self-sufficient from Washington's own small fields, now suffer from a coal deficiency which in large part is due to manpower. The immensely expanding and well-paying shipyards in these states have drawn large numbers of men from lumbering and coal mining; the resultant fuel shortage, plus increased industrial demands and the tight oil situation, makes it necessary to bring in coal from Canada, Montana, Wyoming and Utah. Appalachian coal, delivered by lake vessels to Duluth, is also transshipped westward by rail. Most of the coal going from Duluth to the Northwest is sent not in the usual open-top cars, which would have to return empty, but in poor-condition box cars, which bring back rough lumber for the East. On the other hand, to speed up delivery of vital Minnesota iron ore to Lake Erie ports for transshipment to the steel mills, the lake boats last season were frequently allowed to reurn to Duluth empty, thus cutting down usual coal deliveries by water. In each case it was the needs of war that dictated the operation.

Coal movements by barge have increased throughout the country, especially in the Pittsburgh area and on the upper Missouri, but these still form only 5 per cent of total coal deliveries.

New coal movements are constantly made necessary by the construction of war plants in new areas. A new blast furnace in Fontana, California, a new aluminum plant in Phoenix, Arizona—developments of this kind mean more and new deliveries of coal. It is hoped, though, that the general decrease in the construction of plants, airports and other Army and Navy buildings will free a considerable number of sand-and-gravel-carrying cars for coal traffic.

Waterways

The war has brought about greatly-increased activity in America's inland waterways, especially the Great Lakes, over which passed during the 1942 season the record-breaking total of 92,000,000 tons of iron ore. Moving from the Minnesota iron ranges to the Lake Erie ports of Erie, Toledo, Huron, Cleveland, Ashtabula and Conneaut, whence it is transshipped to steel mills, this ore is the main supply of the arsenal of Democracy. The season was an unusually long one, lasting from the last week in March to December 9. Ore was given priority over all other shipments; lake movements of grain and coal were restricted in its favor. Manpower and weather conditions on the lakes will largely determine the ore haul of 1943.

Doing their part to fill the increased needs of war, the country's rivers and barge canals are in most instances being used for transportation pretty much up to the capacity of present equipment—a very different picture from as recently as six months ago, when barges were lying idle and government agencies were begging industry—and being begged themselves—to make greater use of the waterways.

Trucks

Various wartime causes—manpower shortages, local shortages of parts, lack of business and lack of rubber—have put perhaps 200,000 of America's 4,500,000 trucks out of operation, but the

ton-mileage being hauled by tracks in intercity service is 10 per cent more than the last available figure for the entire fleet. A 40 per cent cut in truck mileage from that traveled in 1941 is made necessary this year by the decreased amount of crude rubber available: as in the case of busses, even the recapping of a truck tire involves the use of crude rubber.

Under consideration is a proposal to limit the length of truck hauls, railroads being generally considered more efficient for long-distance moves. If this were to be put through, however, it probably would be on a regonial basis; there are plenty of terrains where long hauls can be made by truck alone. The 35-mile speed limit has been lifted for emergency deliveries for the Army, Navy, Maritime Commission and War Shipping Administration. American truck and bus operators grumbled when the 40-mile limit was imposed, but accepted it; the reduction to 35 miles has met with general opposition.

Air Picture

Of the 434 planes operated commercially within and beyond the Continental limits of the United States by United States airlines before Pearl Harbor, almost half have been taken over by the armed services which operates them as part of its vast fleet of planes carrying material and personnel both at home and abroad. Those planes which are still operated by the commercial airlines are carrying only slightly fewer passengers than were carried by the whole fleet before the war.

Manpower

In addition to operating with a shortage of rubber and equipment, and widespread shortages of gasoline and parts, American wartime transportation is also struggling with a shortage of personnel. It is just about as hard, these days, to keep together an existing group of employees as it is to recruit new ones. At the beginning of this year 2,700,000 Americans were working in for-hire transportation jobs within the country—an increase of 200,000 over last May—and turnover is considerable.

Although transportation has been classified by the War Manpower Commission as an essential activity, local Selective Service boards have been on the whole less disposed to grant deferments to transport workers than to men engaged in production —the chief exceptions being among employees of the commercial airlines and the crews of the lake steamers carrying vital iron ore. In addition to these inroads by the draft, jobs in war plants have taken many transportation employees. A number of branches of transportation are unable to compete with the higher wages paid in other war industries, and skilled transportation workers are in demand in many war plants which pay time and a half after 40 hours—an advantage not enjoyed by many men and women in transportation jobs. This means that in the very centers of war industry where worker transportation is most essential—Detroit is a glaring example—manpower shortages in transportation ranks are most acute.

Due to the well-established system of seniority rights, a larger proportion of older employees has traditionally been found on the railroads than elsewhere, especially among skilled groups; but even here wartime expansion has brought in younger men who are likely to be drafted or who have accumulated too little seniority to resist other better-paying jobs.

The greatest railway manpower losses have been among low-paid, unskilled maintenance-of-way workers and among yard crews and clerical staffs, although the railroads have been reporting shortages also among firemen, brakemen, switchmen and skilled shop craft workers. Mexicans will probably be imported this year for track maintenance in the West, and women are filling more and more railroad jobs. A total of 11,700 women is at present employed by the Pennsylvania Railroad alone, a large proportion in jobs formerly held by men. In January, 1943, a total of 63,187 women held jobs on railroads. As yet, women are not occupying as many railroad jobs as they did during the last war, when 100,000 were employed at the peak. Negroes are filling increasing number of skilled and semi-skilled railroad jobs, but, war or no war, unwillingness to employ Negroes in many types of railroad jobs persists.

As in other branches of the transportation industry, railroad employees are working longer hours, making possible in this way the maintenance of increased operations without proportionate increase in personnel. The average work week of all railroad employees is well above 48 hours. Last October it was above 51 hours, and in some occupations 60 hours or more—figures which equal or surpass those for workers in war plants. In the train and engine service, despite mileage limitations (which are in many cases being ignored by mutual agreement between management and labor), the average is about 50 hours.

The long hours being put in by dining car waiters have already been mentioned. About 1,000 sleeping car porters have been drafted, and about 2,500 new men have been hired during the past year to take their places and to handle the increased passenger load. Porters are paid time and a half for any work beyond 250 hours a month, and most of them are at present working overtime. This is a considerable change from before the war, when the 250-hour limit was seldom reached. Nowadays even the new and extra men doing the untipped work on troop trains are making more money than the average porter made formerly with tips; but a considerable amount of illness and forced absence due to overfatigue is reported. Few sleeping car porters have left to enter war industries.

"Quickie," local strikes have occurred despite labor's no-strike pledge. Rules which are wasteful of manpower or transportation equipment have not been wholly eliminated. Although the national officers of the transportation labor organizations have uniformly shown an understanding of the nature of the war, the memberships have on some occasions insisted upon "unionism as usual."

Non-Op Wage Hearing Concluded

ORAL arguments in the hearings of the demands of the non-operating employees for a wage increase of 20 cents an hour, a minimum of 70 cents an hour and a closed shop, which an emergency board has been conducting at Chicago since March 1, were concluded on May 4. On May 3, F. L. Mulholland, counsel for the unions, summarized for the unions, and B. E. Dwinell, counsel for the Western lines and general attorney of the Chicago, Rock Island & Pacific, and W. T. Joyner, counsel for the Southeastern lines and division counsel of the Southern, argued the railroads' case. On the next day, C. A. Miller, vice-president and counsel for the American Short Line Railroad Association, and A. M. Hartung, vice-president of Railway Express Agency, Inc., argued these cases, while J. Aronson, general counsel for the carriers and vice-president of the New York Central, closed the carriers' argument. When the carriers' surrebuttal ended, the chairman announced that the board would confer with union representatives on May 5 and with carrier spokesmen on May 6—and that the hearing would be recessed until May 7.

Mr. Mulholland argued that the board has before it only one dispute, rather than four as opposing parties contend, "because the short lines, the Express Agency, and the special car lines, as well as the Class I railroads, perform functions which constitute essential parts of railroad transportation. All of them are dependent for their financial success upon the degree of business activity experienced by the railroad industry as a whole and by Class I carriers in particular. All are subject to the Railway Labor Act in the matter of collective bargaining with employees."

He contended that "smallness and weakness" of the road, the "financial condition of the company," the "inability of the road to meet its operating expenses" or its "inability to pay," are matters which are not controlling

in the determination of the level of wages and the scale of working conditions to be granted by a railroad to its employees. "If in these prosperous times there are railroads that do not have and honestly cannot secure the funds needed in order to pay reasonable wages to employees, their situation need cause us little concern for it is apparent that they perform no significant public service, as otherwise the public would support them by adequate patronage," he said.

Railway Express Agency, Inc., he continued, does not occupy an operating position which serves to distinguish it from the balance of the railroad industry, because it not only forms a part of the railroad industry but is the industry. "It is owned by the railroads, is financed by them and it operates in close connection with railroad operations," he argued.

In arguing that special car companies are a part of the railroad industry, he contended that "if the railroads generally were to attempt to equip themselves with refrigerator and other special cars for use primarily on their own lines, such cars would necessarily be idle for a considerable portion of each year. To guard against this uneconomical result, there have been incorporated a number of subsidiary companies, railroad owned, who acquire and maintain special cars that can be used efficiently. The relation between the railroads and the car lines is financial and functional."

Mr. Mulholland cited the revenues of the railroads as an argument for increasing wages, stating that railway operating revenues in 1942 were the greatest in history. For the first time, he said, gross revenues exceeded $7,000,000,000 and were 17 per cent above the previous high of 1926 and 19 per cent above the average for 1926-1929. "The business and financial status of the carriers," he said, "has particular significance in this case on account of the inflationary tendency which is admittedly present in the existing war economy. The evidence clearly establishes that the wage asked by railroad employees can be easily paid without any corresponding increase in rates of fare, and hence, that it will not contribute to the so-called inflationary spiral."

In comparing railroad and manufacturing wages, he said, "we are not asking this board to bring the wages of railroad employees to equality with the manufacturing industry which pays the highest average hourly earnings, nor do we feel that those workers whom we represent should be compared with employees receiving the lowest average hourly earnings. To the extent that the employees in the railroad industry are compensated below the average compensation in manufacturing industries, there certainly exists an inequality. The fact that disparity is 20 cents per hour demonstrates clearly the inequality which exists."

Union Shop Defended

In arguing for the union shop he cited the following matters that should be taken into consideration; the check-off is not involved; a carrier may hire those who are not members of a union; no limitation is placed on the management's right to hire and fire; and there is nothing in the proposal that in any way interferes with the normal and usual operation in this industry.

The benefits that would result from the union shop, he said, would be: a strengthening of union discipline; promotion of better union-management relations; increased co-operation between union and management; and the stimulation of the less than 10 per cent of non-member employees to take an active interest in, assume responsibility for and contribute to the cost of maintaining fair and equitable conditions of employment upon the railroads.

In answering the challenge that a union shop is not permitted under the Railway Labor Act, he contended that it is not the function of this board to interpret the law or to pass on legal questions. "The legal questions are not in issue," he said.

Dwinell Argues Against Closed Shop

"There is no distinction between the proposal of the employees and some proposals of compulsory union membership," Mr. Dwinell argued. "In the so-called closed shop, there is compulsion upon a man to belong to a union before he enters employment. There is also compulsion that he remain a member. In the union maintenance agreement there is a compulsion upon a man to remain. Under the union's proposal, there is compulsion upon a man that he join and remain. The difference, then, between the three kinds of agreement is simply a difference in the degree of the incidence of compulsion. The language of the Railway Labor Act is that it shall be unlawful for any carrier to influence or coerce employees in an effort to induce them to join or remain. Therefore, in their proposal, there is the double incidence of compulsion.

"It was stated that the union shop would work no great difference in the relationship between the carrier and its employees, because, unions now represent the employees; the railroads now recognize the organizations; the railroads now have agreements with the organizations; and the carriers now deal with the organizations and most employees are members of the organization. Whether Mr. Mulholland intended it or not, he proved by the mere recital of the facts, that there is no necessity for the union shop on the ground of union security, and there is no necessity for dealing at length with the merits of a proposal when no good reason can be advanced, in the first place for its adoption. The real reason is that the union shop would strengthen the discipline of the unions."

Mr. Joyner argued that the President's order of October 2 limits action on wages except as may be necessary to correct sub-standards of living. The railroad minimum of 46 cents an hour, he went on to say, is larger than the prevailing wage in the rural areas where it applies. Mr. Miller challenged the jurisdiction of the board to make any recommendations which would countenance the so-called "union shop." He also contended that the unions have a separate dispute with each of the short lines individually, and not collectively, and that the board should make its recommendations on the basis of the merits of the case in the light of conditions on individual lines. Mr. Hartung said that the unions, in their demands on the Express Agency, had not contended that their wages (averaging 93 cents per hour, straight time; extremely few employees receiving less than 70 cents) were sub-standard. He also invited the board's attention to the jurisdictional controversy which would arise between the Clerks' and the Teamsters' unions if an attempt were made to apply the closed shop to express.

In summarizing the carriers' oral argument, Mr. Aronson called attention to testimony on family incomes in the United States, introduced by the unions. On the basis of these figures, he argued, if railroad wages are to be increased, then 35 per cent of the country's families are due for a similar pay boost. There is, he said, no railroad employee earning less than 60 cents an hour who has not had a wage increase of at least 20 per cent since January 1, 1941.

The Braking of High-Speed Trains*

A consideration of factors in post-war competition and a discussion of a development designed to help the railroads meet it

By C. D. Stewart

Chief Engineer, Westinghouse Air Brake Company

THE stress of war brings technological improvements in months that under less strenuous circumstances take years to achieve. And because modern warfare is so highly mechanized, the nature of many of these improvements is of necessity mechanical. Furthermore, since this particular war is global in character, transportation is one of the most vital services. Therefore, as we would expect, the greatest improvements are being made in the newer means of transportation. This newer means, of course, being air-borne transportation.

It is most fitting, therefore, that those of us who are interested in rail transport, take stock in order that when peace comes we will not be unprepared for the adjustment that must follow. It seems to me that it would be worthwhile to analyze briefly what place others means of transportation may have in our post war world so that we may be better prepared to say what changes or improvements may be advisable and desirable in rail transport.

Of these other means, air-borne transport comes first to mind because it has speed for its major appeal. Next in importance is highway transport because under our present state and national public highway policy, low direct cost is possible. Furthermore, undoubtedly the great Pennsylvania Turnpike will be used as a model for many additional miles of new construction. Therefore, highway transportation will have additional new advantages. In these two competitive transportation systems, we have two basic reasons for keen competition, namely, speed in the one, low cost in the other.

Even if we were so minded, there is little that anyone could do to make these two modern forms of transportation less appealing, but on the other hand, the situation is not as hopeless as some people would have us believe. Either because of wishful thinking or because of lack of full information, there are some who predict the gradual ending of the railways' usefulness. This type of observation has advanced to the point that numerous men in high positions have attempted to draw a more reasonable picture of the future of transportation.

W. A. Patterson, president United Air Lines, before meeting of the Railroad Securities Committee of the Investment Bankers' Association of America, stated:

"The future of the airplane in commerce is indeed great, but it appears that this future will be realized without serious embarrassment to the steamship lines or to the railroads. The volume of domestic air cargo could increase one hundredfold and yet capture only one-tenth of one per cent of the freight-ton miles now carried by the American railroads. Our economy demands the services of all the various types of transport media, each fulfilling the requirements peculiar to its own inherent characteristics. It would appear that the airplane can not supplant, but instead it will supplement the railroads."

It is well and good that the railroads be considered an institution of public necessity but that does not of itself insure sufficient business to make operations profitable. The other agencies will attempt to increase their former share of goods for haul and they will have striking advantages with the improvements that this war is bringing into being. Therefore, it is advisable to consider what improvements are available to the railroads that will put them in a better competitive position. Before referring specifically to these, I would like to quote from one more authority who states the railroad's case most clearly:

According to Carleton W. Meyer, assistant to president, New York Central: "The capacity of the cargo plane is small, but *ton miles* rather than *tons* measure the productivity of a transportation machine. The five-ton cargo airplane traveling at 150 m.p.h. produces 750 ton miles per hour, the same as a 45-ton railroad car moving at the average railroad freight train speed of 16.5 m.p.h. The available facts indicate that railroad merchandise freight service after the war will have to be operated at speeds comparable to present passenger train speeds if it is to handle a satisfactory volume of business."

Improvements in Brake Control

I should like to discuss one new and ingenious means by which the movement of important traffic can be materially expedited. This embraces a recent advancement in the art of brake control which has for its objectives shorter stopping distance with provision for the control of slipping wheels when sub-normal rail adhesion is encountered. Developed for the streamlined passenger trains, it is giving highly successful performance on these trains from coast to coast. And now with thought being given to stepping up l.c.l. freight and express service to substantially passenger train schedules with cars and trucks of suitable design for this type of operation, the improved control of the braking becomes of equal importance.

One of the principal limiting factors in establishing maximum braking force has been the minimum rail adhesion that might be encountered under some local adverse rail conditions. The relatively low emergency braking force commonly used for many years was established through experience with the form of brake control then available, which as you know had only one brake cylinder pressure value throughout the stop. No wheel sliding resulted, except under exceedingly poor rail conditions because the retarding force was based on a rail adhesion value much below the average encountered. Obviously, therefore, if a braking force is employed that is more in keeping with the normal rail adhesion, the stopping distances may be materially shortened. But to avoid wheel

* Abstract of a paper presented before the February meeting of the Railway Club of Pittsburgh.

sliding with this higher braking force, it is desirable to add means whereby the braking force may momentarily be reduced automatically when subnormal rail adhesion is encountered temporarily, and also this same means may be employed to pilot the functioning of apparatus that steps down the braking force as the speed reduces. Thus it is possible to use the brake cylinder pressures that are correct for the entire speed range rather than a constant pressure that must of necessity be a compromise. That is, not too high for the low-speed zone where shoe friction is high, and not high enough for the high-speed zone where shoe friction is low. These functions are performed by the wheel-slip control and speed pressure regulator.

In view of the fact that the coefficient of friction between the metal shoe and the car wheel increases with the reduction in speed, it follows that theoretically the brake-cylinder pressure should be regulated continuously downward to counteract this phenomenon. Actually it is not necessary to have the regulating device perform so precisely. Actual road tests show that it is sufficient to regulate the brake cylinder pressure from the maximum to the minimum in four steps and that a very close approximation to the ideal is secured thereby.

How Regulation of Pressure Is Achieved

The means by which this desirable function is accomplished consists, first, of a small direct current generating device that develops current in proportion to speed; second, of three electric relays, each one of which is tuned to a different predetermined current that causes them to operate when a predetermined speed is attained; and, finally, of a brake-cylinder pressure-regulating device, termed a differential relay.

The maximum braking ratio with speed-pressure control may be raised from the conventional of 150 per cent to 250 per cent of the car weight. This braking ratio prevails from top speed for the train down to 65 m.p.h. At approximately 65 m.p.h. the first speed sensitive detector relay functions and the electro-pneumatic relay initiates a reduction in brake-cylinder pressure. If the stop is being made at the maximum contemplated rate, such as prevails with an emergency application, the first brake-cylinder pressure reduction is completed about the time the train speed is reduced to 40 m.p.h. At this point the second speed-sensitive relay functions and the differential relay now initiates the second brake cylinder pressure reduction.

The braking ratio during this time has been reduced from 250 per cent to 200 per cent, and then from 200 per cent to 150 per cent. At 20 m.p.h. the third and last speed-sensitive relay functions and the differential relay initiates the third brake cylinder pressure reduction. The braking ratio is thereby reduced to 100 per cent and this value prevails to the stop.

By the same means the brake-cylinder pressure for stops from intermediate speeds is limited to the value that is suitable for the particular speed at which the application is initiated.

One striking example of the advantage of this plan of brake-cylinder pressure regulation is on the occasion of an emergency brake application by the conductor's valve at low speed, such as when starting out of a station.

There are two plans for applying speed pressure control, both of which are in use today. For trains which remain premanently coupled, two centralized speed-control units regulate the entire train. For trains that may have their consist altered, individual speed control units are applied to each car. With the first plan, control wires are run from the centralized units throughout the train, and with the second plan, each car is a self-contained unit in itself. The second plan is obviously more flexible and the full benefit of the modern and powerful brake is always available in trains of any consist. Large returns are immediately available from each modern brake equipment that is added to existing trains in that the stopping distance is shortened in direct proportion to the increase in the number of such equipments in any train.

For wheel-slip protection the speed-control generator is used also for the protection o fits particular axle and the same type of electric generator is added to each of the other axles of the train. Two of the electric relays used for speed-governor control are likewise given a dual function to perform, and other electric relays of similar appearance and size, but different in function, are added to the relay panel. As you will recall, we stated that the electric relays used for speed-pressure control are constructed so as to be responsive to a certain *speed,* having in mind that speed and voltage values are synonymous. The electric relays used for wheel-slip protection on the other hand are so constructed as to be responsive to a certain rate of *change in speed.* There is no difficulty whatever in having these relays designed to ignore the rates of change in speed that are incident to normal stopping of the train and yet infallibly recognize rates of change in speed incident to a wheel commencing to slip.

For example, the normal retardation rate of a train is about two and one-half miles per hour per second, and it may reach under unusual conditions five or perhaps five and one-half miles per hour per second. On the other hand, a wheel slipping to a stop may reach a rate of deceleration of 100 m.p.h. per second. The latitude this situation affords is so broad that we are free to select almost any rate we care to employ with our wheel-slip control relay. We have chosen the rate of 10 m.p.h. per sec., first, because it provides sufficient margin above the maximum train retardation rate to insure against unintentional functioning, and yet incipient wheel sliding is detected early enough to make possible the lowering of brake-cylinder pressure in time to avoid the wheel coming to a complete slide. In fact, we have taken graphic records of wheel retardation in actual road operation and have been fortunate enough to record graphically incipient wheel sliding, and in some cases the reaction of the wheel-slip controller was so prompt that it required careful analysis of the records to locate the change in the pattern produced by the wheel first slowing down and then resuming train speed.

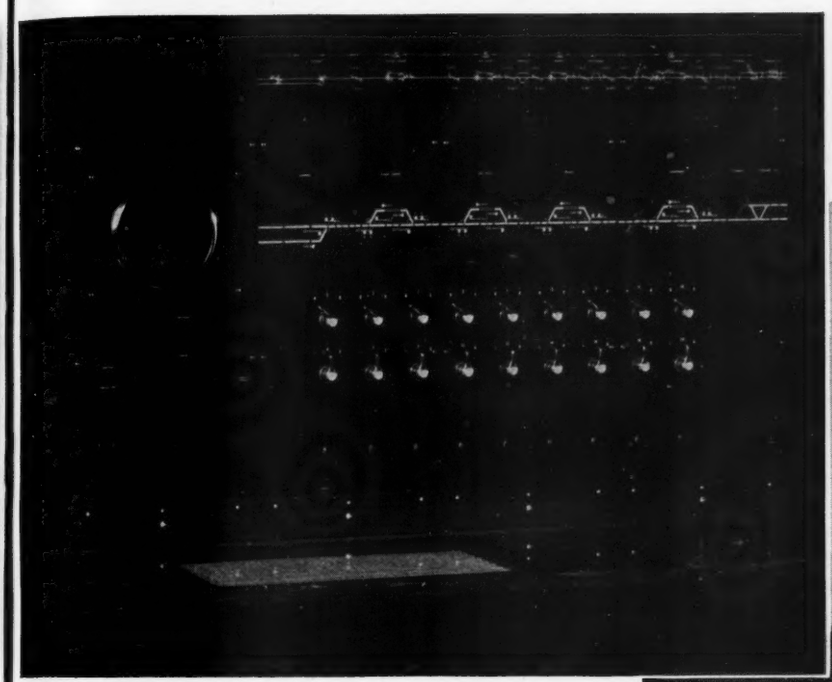
Makes Maximum Brake Performance Possible

It may be asked if this anti-wheel-slip device, which we have termed Decelostat, will lengthen the stopping distance if it functions as a result of a wheel slipping, and particularly in high speeds. The answer is that it does not, as has been demonstrated by actual road tests. As a matter of fact, the stopping distance is shortened because a sliding wheel is not as effective in stopping a vehicle as one braked just under the point of wheel sliding. The ability materially to increase the braking effort in the manner in which we have described makes possible consistent maximum brake performance under all kinds of adverse conditions, equivalent to the best performance that otherwise is only possible under the most favorable rail conditions.

Burlington Installs 39 Miles of Centralized Traffic Control

Increases track capacity and reduces train schedules on important single-track line

By W. F. Zane,
Signal Engineer
Chicago, Burlington & Quincy



Above—The C. T. C. Control Machine In The Dispatcher's Office At Aurora Includes A New Type All-Electric Train Recorder. Right—Eastbound Zephyr Train Passing Westward C. T. C. Signal At The Aurora Siding

THE Chicago, Burlington & Quincy has recently installed centralized traffic control on a 39.9-mile single-track section of line between Aurora, Ill., and Steward Junction, on its Chicago-St. Paul main line. The Burlington's line from Chicago to Aurora, 37.7 miles, is multiple track to accommodate local commutation as well as through traffic. At Aurora, the railroad divides, a double-track main line extending westward toward Omaha and Denver, and another main line extending northwest through Savanna, Ill., to St. Paul, Minn., 427 miles from Chicago. Between Aurora and Steward Junction, 39.9 miles, this St. Paul line is single track, beyond which 8.5 miles of double track extends to Flag Center. This latter section is used also by trains of the Chicago, Milwaukee, St. Paul & Pacific, and was equipped with centralized traffic control in 1929, the signaling being arranged for train movements in either direction on both tracks. This centralized traffic control territory is controlled from a machine at Rochelle, Ill., which is about midway in the territory. West of Flag Center, the line is single track for 59 miles to Savanna, beyond which point double track extends for 282 miles to St. Paul.

In the line between Chicago and St. Paul, the bottlenecks have been the two sections of single track between Aurora and Steward Junction and between Flag Center and Savanna. For this reason, it was decided to install centralized traffic control on the Aurora-Steward Junction section in 1942, and to make a similar installation between Flag Center and Savanna at some future time.

Character of the Line and Traffic

Between Aurora and Steward Junction, the line traverses rolling prairie country. Between M. P. 76 and 72.3 the grade ascends eastward at rates varying from 0.1 to 0.67, with a short section of 0.82 per cent grade. On the remainder of the territory, the grades are rolling, with short grades up to a maximum of 0.85 per cent. In general the curvature is light. At M. P. 77.5, just east

of Steward Junction, there is a 3-deg. curve. There are 2-deg. curves at M. P. 55, and at M. P. 55.7. Trains operated by steam locomotives are restricted to 60 m. p. h. on the 3-deg. curve, and to 75 m. p. h. on the two 2-deg. curves.

Four light-weight Zephyr trains hauled by Diesel locomotives, and ten passenger trains with standard equipment and hauled by steam locomotives, are scheduled over this territory daily, in addition to an average of about 9 freight trains. Extra trains are operated as required, so that the total number of train movements daily during a recent month ranged from 24 to 30.

A large percentage of these trains are handled over the Aurora-Steward Junction section in peak periods during the early morning and late evening hours, as will be explained later when discussing the benefits of the C. T. C.

Layout of Sidings

Prior to the installation of C. T. C., sidings were located at Sugar Grove, Big Rock, Hinckley, Waterman, Shabbona and Lee, with advance sidings at Aurora and at Steward Junction. Incident to the present improvement, the siding at Big Rock was extended to increase the capacity from 84 to 146 cars, and the siding at Shabbona was extended to increase the capacity from 130 to 228 cars. A new siding, Mored, with 125-car capacity, was constructed at a location where no station or road crossings are involved. With these changes and additions, the sidings at Sugar Grove, Big Rock, Mored, and Shabbona, as well as the advance siding at Aurora, equipped with power switches and C. T. C. controlled semi-automatic signals for use for meeting and passing through trains. Number 15 turnouts were installed at these siding switches, so that trains can enter or depart at speeds up to 25 m. p. h.

Reference to the accompanying plan shows that the distances between controlled sidings are not uniform, being 4.86 miles between Aurora and Sugar Grove, 4.04 miles between Sugar Grove and Big Rock, 6.6 miles between Big Rock and Mored, 8.05 miles between Mored and Shabbona, and 8.83 miles between Shabbona and Steward Junction. This spacing of controlled sidings was planned to provide greater flexibility in making meets on the eastern half of the territory than on the western half.

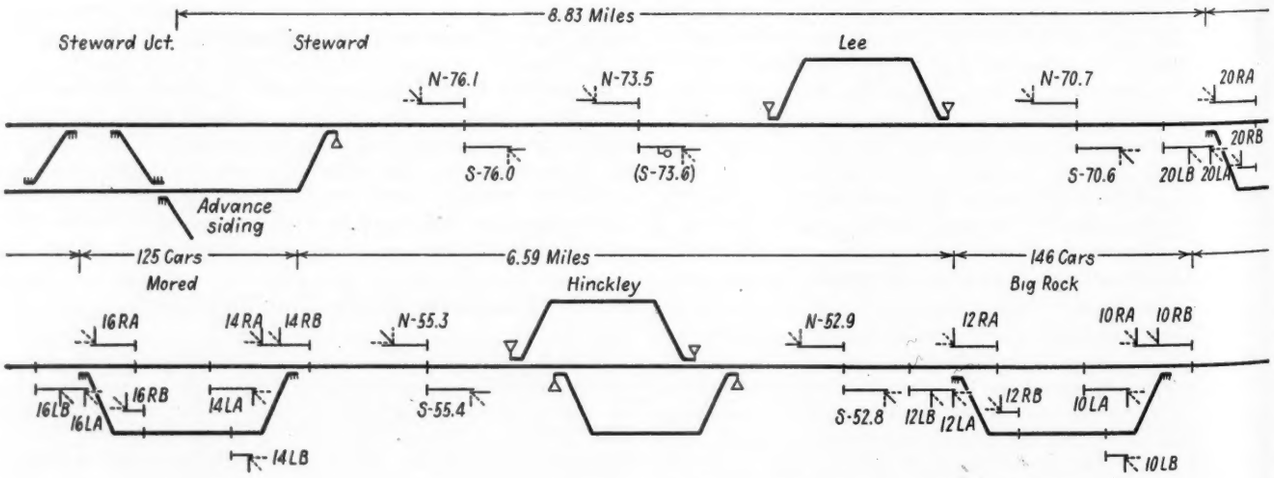
The east end of the advance siding at Aurora is included in the interlocking at Aurora. The sidings at Hinckley, Waterman and Lee were shortened, and then use confined to trains doing local work. All hand-throw switches in the entire territory were provided with electric locks.

The electric switch machines installed at the nine siding switches are the G. R. S. Co. Model 5D, with dual control so that they can be operated manually by train men when making special switching moves. The machines are equipped with built-in controllers including normal and reverse contactors and over-load relays. The brakes are of the new improved outboard type. The motors are designed to operate on 24 to 32 volts d-c., and, with 24 volts at the motor, will operate a switch in about 7.5 seconds. The new C. T. C.-controlled, semi-automatic signals are the SA searchlight type, and the new intermediate signals are the color-light type.

When first considering this proposed project between Aurora and Steward Junction, the signal department made preliminary studies based on experience gained by study of projects on other roads, as well as on 221.9 track miles of C. T. C. which has been in service for several years on other sections of the Burlington. An analysis was made of train sheets, conductors' delay reports and other operating data. For typical periods, train movements were re-dispatched on the basis of C. T. C. operations and with the proposed arrangement as well as car capacities of sidings. From these redispatched charts, conclusions were drawn as to the train time, car days and locomotive hours which could be saved. An analysis was made of the results of these savings in the accelerated delivery and later receipt of traffic from and to other portions of this railroad as well as connecting lines. The project was planned in 1940 and materials were ordered promptly, but due to delayed deliveries the field construction was not started until Sept. 21, 1942, the installation being completed and placed in service on Dec. 28, 1942.

Benefits of the C. T. C.

The benefits in train operations accomplished with the new siding arrangements and the centralized traffic control have been greater than forecast by the preliminary studies. Previously train movements were authorized by time table and train orders with automatic block signal protection. Although the number of scheduled trains has not increased, more extra trains were operated in



Track and Signal Plan of the Centralized Traffic Control Territory

later months, as many as a total of 27 trains having been handled in certain 24-hour periods.

A complication is that a large percentage of the trains must be handled over the Aurora-Steward Junction territory in two peak periods, during the early morning and late evening. For example, three inbound eastward through passenger trains are scheduled through this section between 5:48 a. m. and 7:50 a. m. Likewise during these hours, several merchandise freight trains scheduled for morning deliveries in Chicago must be handled. Some of these trains are received at St. Paul from connecting roads extending to the West Coast. During January, when temperatures ranged down to 40 deg. below zero, some of these through trains were oftentimes late. As a result, these eastward trains met westward morning trains on the new C. T. C. section, in some instances as many as 7 trains being on the 40-mile section between Aurora and Steward Junction at one time. A similar peak often occurred during evening hours. As explained by the dispatchers, if the C. T. C. had not been in service, the traffic during the last few months could not have been handled with time-tables and train orders without excessive delays.

Counting only the scheduled trains, six meets and two passes are made in this territory daily. Under train order operation, each manifest freight incurred considerable delay in this territory. Since the C. T. C. was placed in service, these delays have been reduced to an average of 10 min., thus resulting in a saving of road time on manifest freight trains of from 10 min. to 2 hr. 11 min., or an average of 32 min. Studies of the automatic train graph record show furthermore that 66 per cent of the trains move through the C. T. C. territory with no delay. Another important fact is that the passenger train time has been reduced an average of 5 min., because no speed reductions are required to enable the enginemen to observe train order signals at the intermediate stations. On the average, train time has been reduced about 10 per cent. Considering the sub-division from Aurora to Savanna as a whole, the installation of C. T. C. on the 40-mile section has reduced the number of train orders 39 per cent.

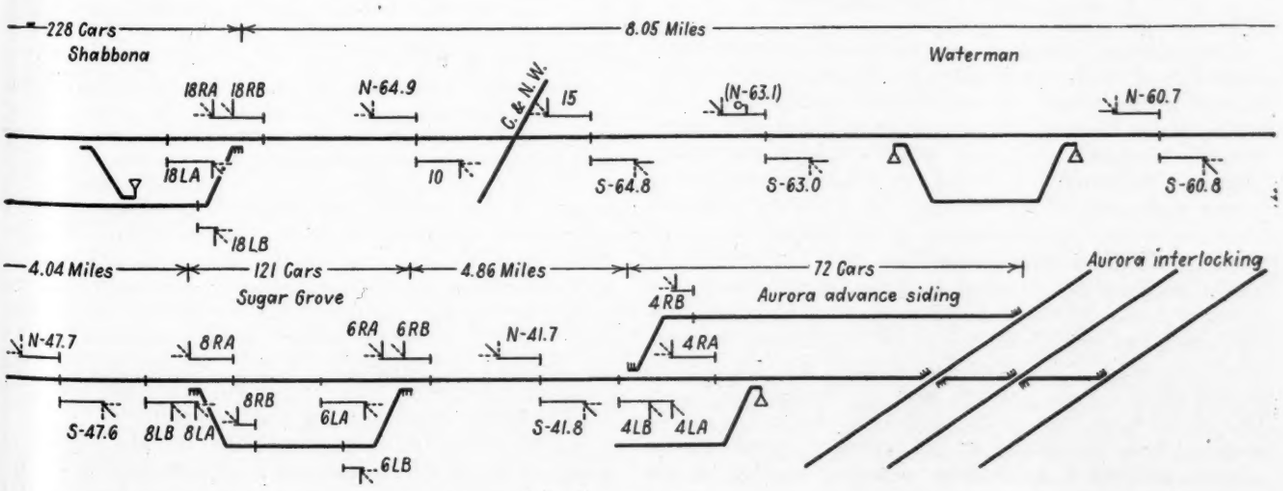
The C. T. C. control machine is located in the office at Aurora and is manipulated by the dispatcher. Nine levers each control an electric switch machine at an end of a siding. Nine signal levers each control four signals at a corresponding end of a siding. Indication lamps above each switch lever repeat the actual position of the corresponding switch in the field, and lamps above each signal lever repeat the aspects displayed by the signals controlled by that lever. The illuminated track diagram has normally-extinguished lamps, each of which is lighted red when the corresponding section of main track is occupied by a train, all portions of the main track being so indicated.

One of the Dual-Control Electric Switch Machines

A loud-speaker in the dispatcher's office is connected to a circuit which extends to a telephone at each of the switches in the field. If the dispatcher wants to talk to a maintainer who may be in the vicinity of one of the power switches, a corresponding toggle switch on the control machine is operated and a control is sent out which causes a lamp to be lighted and a buzzer to sound at the corresponding field switch location.

The desk portion of the control machine includes an automatic train graph. Horizontal lines on the constantly moving graph sheet represent the passage of time, and vertical lines represent the locations of OS points which, in the field, are the locations of power switches and the approach annunciator sections occupied by trains when approaching the C. T. C. from either direction.

The train recorder is all-electric in operation. The chart is made of Teledotos paper. When a train occupies the track circuit at a power switch location, a mark



on 39 Miles of Single Track between Aurora and Steward Junction

is made on the chart paper by electric current passing from an energized stylus through the paper to a platen beneath the paper. If the train occupies the OS track circuit for any length of time, a repeat mark is made every 20 seconds. Each time a semi-automatic C. T. C.-controlled signal is cleared at a power switch location, a mark is made automatically on the chart to the right or to the left of the vertical OS line for that particular field station, depending on whether a westbound or an eastbound signal has been cleared. A repeat mark is made every 20 seconds while the signal remains clear.

Interesting Change-Over Method

In view of the fact that automatic block signal protection had been in service on this territory previously, this form of protection was continued in service during the construction and change-over to centralized traffic control. As the new color-light signals were installed, the old lower-quadrant semaphore signals were removed. At each siding switch, when the power switch machine was installed and the new signals were complete at such a switch, the power switch and the signals at such a location were cut in service as a remote-control interlocking controlled by the dispatcher, this change being made effective for both ends of any one siding at the same time. Time tables and train orders were continued in effect, the operation of trains through a switch location being under interlocking rules, in which the signal indications direct trains through interlocking limits between the signals at a switch, but these signals give an engineman no authority to proceed unless he is so authorized by time-table and train orders.

Thus the new facilities were placed in service in four separate groups, each consisting of a power siding layout and new intermediate signaling to the next siding. When the construction was complete at Shabbona, the last siding, the territory as a whole was bulletined in service with C. T. C. in effect to authorize train movements by signal indication, thus superseding operations by time-table and train orders. By this procedure, no changes in switches, signals or circuits were required on the day of the changeovers, except at the final location at Shabbona. A further advantage was that the dispatchers had an opportunity to learn the operation of the control machine gradually, rather than taking over the entire territory at one time.

C. T. C. Line Code Controls

The controls of the power switches and the semi-automatic signals from the machine in the dispatcher's office, as well as the return of indications, is accomplished by means of the General Railway Signal Company's Type-K Class-M coded line system which employs a normally-energized two-wire line circuit from the office at Aurora to the west end of the territory at Steward Junction. This line circuit is independent of the dispatcher's telephone circuit. At some future time C. T. C. may be installed between Flag Center and Savanna, 67 miles, so that the entire territory between Aurora and Savanna, 107 miles, will be under C. T. C. operation. In this event, the G. R. S. carrier link control will be used to handle the C. T. C. section west of Steward Junction. The control machine in the dispatcher's office is of the sectional type, consisting of an assembly of one master section and three application sections, so that if the territory is extended, more application sections can be added as required.

C. & O. Stockholders Get Forthright Report

FAVORABLE factors in the situation of the Chesapeake & Ohio arise from its physical and financial soundness—unfavorable factors are those which have their origin in the position of the railroad industry as a whole. Thus C. E. Newton, C. & O. president, epitomizes the carrier's outlook in a candid and forceful statement to stockholders in the company's 1942 annual report—which appeared recently in a new and highly attractive format.

The C. & O. hauled record traffic in 1942. Its operating revenues and net *before taxes* were at an all-time high—but taxes were 2½ times more than in 1941, so net income declined one-fourth from 1941. Still, net income was more than sufficient to meet the same dividends that were disbursed in 1941. The road continues in excellent financial condition, and it came up to the war in splendid physical shape. These are the favorable factors in its situation.

No Reserves for Undermaintenance

The unfavorable ones relate primarily to the industry as a whole—as Mr. Newton points out—and *"are chiefly the problems of deferred maintenance, and of the railroads' inability to set aside financial reserves with which to meet the costs of post-war readjustments."*

Mr. Newton explains to the stockholders with great clarity how intensively railroad equipment and plant are now being used; how materials and labor are not available to continue upkeep at the same level as "wear-out"; while an absurd tax law prevents laying aside money corresponding to the deficiency in maintenance—with which to put the plant back in shape when the war ends. *"Eighty-one per cent of this money which cannot be currently spent for normal maintenance must be paid out in taxes."*

At the end of the war the railroads ought also to have—for their own sake and as a contribution to national employment—funds available for capital expenditures, "but even such income improvement as we have experienced in recent months is threatened by people who, with only a superficial knowledge of the facts, conclude that the railroads are making too much money and that rates should be reduced." Mr. Newton draws attention, also, to the current effort of the unions to exact an increase of three-quarters of a billion dollars in higher wages. Continuing, he says:

"In considering this issue our stockholders should understand that many of those who most actively oppose the making of provision for the railroads' post-war rehabilitation also know the facts. But they are not disturbed by them because they see in the prospect ahead an opportunity to 'socialize' the railroads—an opportunity that would be realized after the war, when the managements of many roads would be forced to go to Washington asking for funds."

The decision on this question, Mr. Newton concludes, is not for railway managements to make—it is a question for the American people, among whom C. & O. stockholders are included. If they do not approve the prospect, doubtless their representatives in Congress would benefit from knowing their opinion.

Aside from the candid message in Mr. Newton's letter to stockholders, the noteworthy feature of the annual report is the arrangement of essential facts so that they can be grasped at a glance. The pamphlet is illus-

trated with photographs, depicting facilities and functional operations of the road, and includes a simplified balance sheet and income statement, a table of dividends paid since 1899, and a description of the company's contribution to the technological advance of the railroad industry through its laboratory research and tests.

Total income to the railroad from all sources in 1942 amounted to $188,331,886, highest in the company's history, and $34,123,554 or 22 per cent over 1941. Operating revenues comprised $181,809,762 of total income. Net income before federal income and excess profits taxes amounted to $72,407,092 in 1942, an increase of $18,129,933 or 33 per cent over 1941. Federal income and excess profits taxes rose to $39,253,655, an increase of $29,916,240 or 320 per cent over 1941, and as a result net income in 1942 declined to $33,153,437 as compared with $44,939,744 in 1941. Total taxes paid amounted to $49,998,352—equivalent to $27.50 per $100 of revenue; $1,901 per employee; $82.90 per $100 of payroll or $6.53 per share of common stock.

The report expresses the belief that the transition from war to peace should be less difficult for the Chesapeake & Ohio than for most corporations, because of the railroad's access to one of the world's largest deposits of coal and because the market for its coal is highly diversified. The text ends with the following note of qualified optimism:

"The basic fact remains that the railroads are the only means of inland transportation that combine great carrying capacity with speed. Granted sound and constructive legislation, they can be counted upon to hold first place in meeting the country's transport needs, not only in its military necessity but under the changed conditions which must be anticipated for the post-war period."

Such reports as this one are, of course, a helpful step to "constructive legislation"—because legislation, to be constructive, must arise from knowledge of facts by the influential public; and public intelligence is well served when such facts are made available with candor, and in understandable form.

Communications . . .

Does the Public Want Transport Self-Support?

WASHINGTON, D. C.

TO THE EDITOR:

A matter of more than ordinary interest in the *Railway Age* recently has been the proposal of the National Resources Planning Board for including some railroad work in the post-war government spending program, and your able discussions of the proposal.

While I do not accuse Dr. Watkins of deliberately planning an entrée to the socialization of the railroad industry, I do heartily agree with you in principle and with your direct, outspoken manner in proposing the proper solution to this important question. Even if Dr. Watkins' plan is made primarily in the interest of the railroads, the effect would almost certainly be just what you point out.

This proposal, by all rights, should assume transcendent importance. It should become a major public issue. For, upon the way it is decided, depends the issue of private or public ownership of transportation.

Subsidy-Hunters Busier Than Ever

The *only* possible fair and judicious solution of the whole transportation problem is the removal of all subsidies from all classes. If subsidies continue to some and not to others, it seems to me plainly evident that the un-subsidized businesses will simply pass out of existence. That is why the proposal of the National Resources Planning Board merits a most thorough discussion. That proposal, in itself, is admission that subsidies for the other forms of transportation are not expected to be dropped. Indeed, a perusal of "Engineering News Record" Construction Reports indicates the tone of things to come. It can there be noted the tremendous volume of post-war highway construction that is already in the planned stage. Further reading of these columns makes one gape at the huge outlays for "improvements" being financed by the Civil Aeronautics Authority. It appears virtually certain that every town of 2,000 population and up in the land is to have its publicly-provided aviation facilities. They are actually being built right now. With latent huge construction facilities "looking for work" after the war, it would be rash to predict that more and better such highway and airway facilities will not be built.

The essence of the problem then, seems to me to be: Will the public be willing to put all transportation facilities on a self-paying basis? That depends upon how sincerely we want to continue to have privately financed business in this country, which, in turn, depends upon how well the people are informed as to the facts that are germane to the matter. The people are, at present, woefully uninformed on the subject. The majority of motorists seem to feel that they are paying for their highways,—and then some. What they fail to take into account are the huge grants of money and work to the highway system from numerous federal departments not engaged primarily in such business, in addition to the direct and specific grants in terms of money, engineering, and administration of the Bureau of Public Roads, all of which are financed from general public funds.

A further complication is posed by the question: Will the public, even if it knows that a large part of the expense of highways and airways is paid for from general public funds (that they are *not* self-supporting), be willing to change this system? Perhaps public provision of such facilities, socialistic though it is, has come to be so universally accepted that the public will not want to change to the self-supporting basis. In further consideration of this item, it seems that it would be well to digress, for a brief discussion of the development of highway competition.

A fundamental trouble (as regards this particular competitor) is that highway development has come as a sort of "growth" rather than as a planned agency of transportation. That is, up to (let us say) 1920, it was essentially a "growth," whereas, since then, it has been more and more of a planned commercial enterprise. Certainly no one can deny that the modern highway is planned as anything but a big transportation business. Bridges to support heavy tonnages, grades to favor heavy vehicles, curves to allow of speed competition with other commercial transportation, snow and ice removal, and many other such provisions are adequate proof.

Highways No Longer a Local Community Enterprise

For centuries, though, the building of roads was recognized by virtually all minds as a function of local government—and properly so. Only a public body could provide the ways of access to each parcel of land. But, in these days, the users paid for it by allotting a certain amount of their time each year to actual work on the roads, by contributing materials in lieu of personal labor, and/or by direct taxation which fully paid for any out-of-pocket costs to the local government. Since each community provided its own they could not build roads beyond their means, or what they were willing to pay for.

When the automobile became a reality, this concept of "pro-

viding one's own way" was continued,—though on a more elaborate scale, as people were willing to pool some of their money for pleasure. The auto vehicle was essentially a pleasure vehicle. The roads built for it were designed only for that purpose.

Just when the automobile changed from the field of a pleasure vehicle to that of a business transportation vehicle (or combination) is hard to define. But that time, seems to me to represent the turning point in a public attitude toward subsidy for transportation. Recognizing that the roads he could build of his own means were too restrictive of the latent power and speed of his machine, and intrigued by the motor car manufacturers' rapid advancements in the design of the machine, the motorist yielded to the temptation to do more than he could afford in the matter of building roads. First he (collectively) borrowed to build roads; then he got the state to help with it; then the federal government. Prior to this time license fees for autos were required to help pay the costs. The motor clubs became big business organizations, with considerable political power, which was used to propose ever more costly facilities. The motor car manufacturer kept the capability of the machine always a step, or more, ahead of the possibility of its full use on existing roadways.

Let Those Who Order the Meal Pay the Check

The initiation of purely commercial transportation by highway added something new in the concept of the highway as a public function, though. That is, public officials regarded them as commercial arteries. The individual motorist had up to that time, perhaps not consciously, thought of them as "transportation" in a commercial sense. The cost of these facilities had become so largely absorbed by borrowed money and general public funds that the general attitude seemed to be that the roads were "just there"; and that good public officials were those that built more and better roads. This line of musing is exactly the same as that widely held feeling that government "just has" money—all it needs. The public officials, though, were confronted with actual bills for work done. Part of the financing was accepted by the highway users—as a "nuisance." But the demands of organized highway users caused the expenses to mount so rapidly to such gigantic proportions that I think public officials themselves decided that the cost would not be tolerated by the users alone. Subsidy had entered.

Some few realistically-minded motorists recognized the necessity of being taxed for the facilities provided especially for their use; but, even amongst these, there was, and is, widespread belief that the taxes are too high. So hazy is the average non-engineer mind on the enormous cost of modern highway planning, construction, and maintenance, that this attitude is understandable. But the public official is here responsible for not providing, in clear, understandable form, a statement of the costs. With the relatively higher fees collected from purely commercial users, he can "donate," in a sense, to the individual user. But the commercial user also requires and demands much more expensive highways than would otherwise be necessary.

The general public feels that it is paying for its highways. The purely commercial users give the impression that they think they are paying more than their share. Everybody wants 'em; but nobody wants to pay for 'em! The politician, bound to please all, simply *has* to resort to subsidy.

This discussion of an angle of highway development is not extraneous to the point under discussion. It attempts to depict an attitude that will be hard to dislodge.

Business, and Business Papers, Are Fostering Socialism

Until other business magazines and papers, in fields benefitted by public expenditures for transportation, stand forth courageously for what they profess to believe in, and "refuse the proferred gold" for their industries as you do for the railroad industry, there will be continued gains for the socialists. Until treasury officials make clear statements of how much of the total taxes collected go directly and indirectly for roads, airways, and other transportation facilities, the public will be led in ignorance into this state. Until wide publicity is given this whole proposition, the outlook for railroads is dark indeed. It is reflected in the low esteem in which the railroad equities are held by the investing public.

As a small owner of some railroad and railroad equipment and supply stocks, I am desperately interested in protecting what I have worked hard for to get and sacrificed to save. As a railroad patron I am vitally interested in preserving and advancing our finest means of travel and shipping. As an American I am especially interested in fair play,—an equal opportunity for all, and each making its own way. I am against internal subsidies and the invasion of government in the field of business.

Your consistent, forceful arguments for these principles are most encouraging; and it is to be hoped will soon be joined by every magazine and paper and public voice interested in the preservation of private capitalization of industry.

If a *thoroughly informed* public, given an unmitigated opportunity to express itself on the matter, decides to continue subsidizing highways, airways, and other transportation media, then we might just as well decide to accept the proposal of the N.R.P.B. and subsidize railroads in the interest of national defense and cultural advancement.

GILBERT B. GRUNWELL

A "Seller's Market" Is Dangerous to the Seller

CHICAGO

TO THE EDITOR:

Referring to the editorial "Deterioration of Passenger Service" in the March 27 issue of *Railway Age*: I read this editorial with interest, first, because it sounds a timely warning to everyone concerned about the railroads' future; and, second, because it confirms views expressed in an article which I wrote and which was published in your April 25 issue a year ago.

For example: Paragraph 1 of your editorial agrees substantially with my article, wherein I stated: "It is incredible how fast the attitude of an organization toward advertising can change when it enters a seller's market, and this transition comes to a seller of railroad service as rapidly as to a seller of merchandise. Yes, the seller's market is apt to be a danger zone for all who get in. And let the seller, as well as the buyer, beware."

Paragraph 2 of your editorial bears out what was said in the article: "The public will be quick to sense any revival of a monopolistic attitude. . . . If an occasional failure in service, due to the pressure of war traffic, is aggravated by apathy on the part of management, the railroads stand to lose all their recent gains."

Paragraphs 3, 4 and 5, your editorial, further corroborate the following from the article: "All railroads, even those whose facilities are taxed to the limit, should advertise to prevent a 'letdown' in employee morale. There is ample material for copy on the performance of each railroad under the pressure of war. Institutional advertising is bound to effect a better understanding and at the same time let employees know that their company is still soliciting the good will of the public, even when it is impractical to ask for business. . . . Building better public relations is a job the railroads can not overdo. Though an intangible, it is something they can draw on in the future."

Paragraph 6 of your editorial may be compared with the following sentences from the article: "Advertising is quickest and most economical way to inform and cultivate this new market because it can be controlled almost from day to day and its selling force diminished or entirely stopped, or it can be turned to some 'non-selling' purpose, such as creating favorable, friendly opinion. . . . In 1942 all the transportation agencies face a critical period; a time of flux and transition. What they do now will have a strong bearing on what they can do in the post war years."

The overall passenger situation today is perhaps more acute than most of us would have predicted a year ago. Existing conditions present a real menace to the railroads' future standing. As you say, corrective measures call for "Herculean efforts."

Many of the railroads have recently been doing a good job of "war effort" and good will advertising, which, of course, never can or will be a substitute for *service*.

J. V. GILMOUR,
Roche, Williams & Cunnyngham, Inc., Advertising

Railroads-in-War News

Rail Officer Gets Army Merit Award

Transportation Corps engaged in battle for abandoned ammunition trains

The Legion of Merit has been awarded by General Eisenhower to Lieutenant Colonel Frederick W. Okie, Transportation Corps, Army Service Forces, for valorous action under fire in the North African theatre of operations, the War Department has announced.

Exemplifying how the work of the supply and service branches parallels the activities of the fighting arms in this war, the citation reads:

"For exceptionally meritorious conduct in the performance of out-standing services during the period February 16 to 18, 1943. Lieutenant Colonel Okie organized and led a detachment of his battalion beyond our own lines to the vicinity of Moulares, Tunisia, to attempt to bring out two trains of ammunition which had been abandoned after a rapid enemy advance. When enemy forces closed in and made movement of the trains into our lines impossible, he supervised the destruction of the locomotives, assembled his detachment and a number of civilian refugees, and led them all to safety by a circuitous route through the desert to Tebessa."

Working to the last minute, the Colonel barely got out of one town as German tanks entered from the opposite side. Racing along in two trucks loaded with his crew, he was fired upon point blank by an anti-tank gun, but managed to get into mountainous country where he drove up the bank of a dry river bed, escaped with his convoy, and disappeared.

He had an appointment with a superior officer scheduled two days later in a town in Allied territory. When the superior arrived, the Colonel was reported to him as missing, but promptly on the hour he turned up to keep the date.

The Legion of Merit, established by Executive Order in November, 1942, stems from the Badge for Military Merit, America's oldest decoration, established by George Washington in 1782. As in the case of that decoration, it is awarded for "extraordinary fidelity and essential service."

Born in Dayton, Ohio, June 7, 1907, Colonel Okie is a graduate of Virginia Military Institute, Lexington, Va. He was appointed a first lieutenant in the Corps of Engineers Reserve in 1933. Following subsequent promotions, he was ordered at his present rank to the Transportation Corps in November, 1942.

His assignment followed many years of railroad experience. After working summers between school terms as a student apprentice with the Southern, he continued with that road upon graduation from college in 1929. The next year he was made assistant trainmaster at Somerset, Ky. In 1933, he became trainmaster, and three years later was transferred to Birmingham, Ala.

In 1938, he was made superintendent of the Mobile Division of the Southern, at Selma, Ala., returning later that year to Birmingham as superintendent, a position he held until going on active Army duty.

Caustic Soda Zones Revised

To permit a more flexible use of tank cars and trucks and avoid delays in the production of chlorine, a war essential, the War Production Board on May 1 rearranged limitations on caustic soda shipments so that eight zones are set up in place of the former 13, within which delivery of this commodity is authorized without exemption permits under its General Transportation Order T-1.

6,000 Mexicans Being Admitted for Track Work in West

Six thousand Mexicans will be brought into this country for immediate employment as railway track laborers in the Southwestern and Pacific Coast states, Chairman Paul V. McNutt of the War Manpower Commission announced on May 1. They will be employed under the terms of an agreement just concluded by the United States and Mexico, which Mr. McNutt said "will insure that only well qualified workers will be brought into this country and that they will be employed under conditions which will be satisfactory to them, their government, and their employers."

Only unskilled laborers will be brought in, and the track-worker group will be the first to come, orders for such employees having been placed with the United States Employment Service sometime ago by Western railroads. WMC has delegated the job of recruiting the track laborers to the Railroad Retirement Board, and the announcement said that recruitment was expected to begin May 10.

Among other things, the agreement between U. S. and Mexico provides that the Mexicans may not be brought into this country "to displace other workers, or for the purpose of reducing rates of pay or other standards previously established." They will be paid the same wages as U. S. workers receive for the same jobs. Also, WMC will establish machinery for the handling of "any disputes or misunderstandings between the Mexican workers and their employers."

WPB Cuts Material Requests 23 P.C.

Claimants will get 27% less carbon steel than they need in 3rd quarter

That the railroads fared badly in the allotment of critical materials for this year's third quarter was indicated in the War Production Board's May 2 announcement which revealed that the Requirements Committee had found it necessary "to make an overall reduction of more than 23 per cent in the requests of the claimant agencies." Details of the distribution to the Office of Defense Transportation and other claimant agencies had not been made public when this issue went to press; but the WPB announcement did state that as to carbon steel claimant agencies other than the Army, Navy, Aircraft Resources Control, and the Maritime Commission were cut "about 27 per cent" below requests.

"Total requests from claimant agencies," said the WPB announcement, "amounted to more than 20,000,000 tons of carbon steel, while the estimated supply in the third quarter is slightly under 15,000,000 tons. The allotments of carbon steel made by the Requirements Committee are slightly above the estimated supply, to assure full use of all available materials and to create a pressure for reduction of inventories to an absolute minimum." In addition to carbon steel, the third-quarter allotments included 2,500,000 tons of alloy steel, more than 1,000,000 tons of copper products, and nearly 660,000,000 lb. of aluminum.

It was also pointed out that the Requirements Committee has authorized claimant agencies with approved programs to make commitments up to July, 1944, in quarterly amounts equal to those allotted for the third quarter of this year. "This," said J. A. Krug, WPB program vice-chairman and chairman of the committee, "puts into effect one of the basic principles of the Controlled Materials Plan, which is designed to bring about maximum production by permitting orderly scheduling many months in advance."

Repair Stocks Allowed by WPB

Provisions of the War Production Board's **Controlled Materials** Plan Regulation 2 restricting deliveries of certain materials will not apply to materials required to maintain adequate stocks for emergency repairs by transportation systems provided the WPB Transportation Equipment Division has authorized the acquisition of such materials under P-142, the WPB has provided through its Inventory Direction No. 7, effective May 13.

Truce Halted WPB and ICC Coal Orders

Directions issued to railroads last week-end were suspended Monday

Announcement on Sunday night of the 15-day truce which halted the coal strike was followed by the suspension of strike-emergency orders affecting the railroads which had been issued by the War Production Board and the Interstate Commerce Commission.

The WPB orders were M-316 issued on April 30 and M-318 issued the following day. The former generally prohibited any person from accepting delivery from a railroad of any carload of bituminous coal if such person had, or would have after accepting delivery, more than 10 days' supply on hand. M-318 was a similar order covering anthracite; it prohibited deliveries to anyone having more than five days' supply on hand. Railroad duties under these orders were prescribed by the I. C. C. in service orders Nos. 120 and 121, issued in turn on April 30 and May 1 and suspended "until further order of the commission" by service orders Nos. 120-A and 121-A issued on May 3.

Meanwhile Solid Fuels Administrator Ickes, whom President Roosevelt has designated to operate the mines in the name of the government, had suspended the WPB orders. Railroads were advised of the suspensions by telegrams which the Association of American Railroads dispatched at 3 a. m. on May 3. "The suspension of the orders," Mr. Ickes said, "freed for delivery to its original consignees a large quantity of coal. Incomplete reports received and tabulated to early last evening showed that as of 6 p. m. Saturday in excess of 1,500,000 tons had been frozen by the railroads in conformity with the orders."

Before the 15-day truce was announced by John L. Lewis, president of the United Mine Workers of America, Mr. Ickes in a move "to stretch the coal supply" had recommended to Director Eastman of the Office of Defense Transportation the "immediate elimination of all unessential railroad travel for the duration of the coal emergency." Mr. Ickes said he understood that ODT "is now studying ways and means of curtailing 25 per cent of the passenger train and locomotive mileage on the railroads of the United States during the period of this emergency." Such a measure, he added, "will be of great help," and "I count upon your cooperation."

Mr. Eastman issued a statement saying that ODT was studying the situation in response to the Ickes request. "The problem," he went on, "is not a simple one, and formal measures cannot be immediately put into effect. In the meantime, the public must continue to help by abandoning all unnecessary travel and by making plans to postpone all necessary travel that can possibly be deferred. Any increase in travel in anticipation of restrictions on train service will make any future restrictions more severe and will use up coal which may be needed later for war production, the movement of essential freight and passenger traffic, and other purposes." With the suspension of the strike, it is understood that ODT plans no formal action with respect to passenger service unless a new crisis should arise at the close of the period of truce.

At the same time, Mr. Ickes continued to call for conservation, "pointing to the inadequacy of bituminous coal stocks to tide the nation over a prolonged coal emergency," as another of his May 3 statements put it. The administrator cited figures compiled by the Department of the Interior's Bituminous Coal Division, showing that as of April 1 using industries had an estimated 77,292,000 tons on hand. Mr. Ickes saw nothing to indicate that stock positions had improved since that date; and thus he calculated that bituminous coal on hand would last "only a little more than six weeks," if it were evenly distributed, which it is not. The figures showed that the railroads on April 1 had on hand an average of 32 days' supply, an increase of 6.7 per cent over the 30 days' supply on hand March 1. Mr. Ickes said, however, that the April 1 position of "the southwestern roads" was one wherein they had "an average of but 25 days' supply on hand."

ODT Administrative Order

Powers previously delegated by Director Eastman of the Office of Defense Transportation to ODT divisions under various orders and administrative memoranda have been incorporated into Administrative Order ODT No. 1 which was issued May 6.

Eastern Oil Movement

A ban, described by the Petroleum Administration as "temporary," was placed May 3 on tank car shipments of heating oil from Midwestern points to the East Coast. The order does not affect heating oil shipments originating at terminals on the Ohio and Mississippi Rivers, where such oil is transferred from barges to tank cars, nor does it apply to shipments from refineries in the Southwest to New England. On shipments from the Midwest, the ban applies only on oil used for space heating purposes, the announcement added.

While tank car shipments of petroleum products into District No. 1 in the week ended April 24 showed little variation from the daily average of recent weeks, stocks available for civilian use remained at critically low levels, Administrator Ickes emphasized in announcing that the daily average for that week was 922,870 barrels. Receipts of kerosene in drums in New England averaged 16,983 barrels a day during the same week, a substantial decline from the results of recent weeks, Mr. Ickes said.

This week the Office of Defense Transportation made public its General Order ODT 37, effective in all sections June 1, which provides for minimum quantity delivery restrictions and "elimination of many peacetime frills" in local tank truck operation, particularly in servicing retail gasoline outlets.

Mid-Week Travel Urged by A.A.R.

With travelers' co-operation passenger load can be better distributed

Public co-operation in making the most of the available passenger facilities was urged in a statement this week-end by J. J. Pelley, president of the Association of American Railroads, which was a follow-through on the understanding reached at the April 30 meeting of the A. A. R. board of directors that the Association would lend its support to the Office of Defense Transportation program for dealing with the passenger situation. It is understood that A. A. R. magazine advertising along the same lines is now being prepared

Pointing out that "passenger travel on the railroads now is twice what it was a year ago, and nearly four times what it was in 1939 before the war began," Mr. Pelley said:

"To carry this vastly increased travel, the railroads have just about the same number of passenger cars and engines which they had then. Other war needs make it impossible to get more, except for a limited number of troop sleepers which it is hoped will be built this summer.

"To move the two million service men and women who travel each month under military orders in special cars and special trains, takes more than half of all the sleeping cars and about one-third of all the coaches.

"With what equipment is left, the railroads must move individual service men or smaller groups traveling under orders, soldiers and sailors on furlough, families visiting service men at camps, business men and other workers who must travel on war business, those who can no longer use their automobiles, and every other sort of traveler by rail.

"Railroads and railroad men are doing their best to meet this great and sudden increase in demand for service. In spite of the best that they can do, however, travelers sometimes have to wait at ticket windows and cannot always get the accommodations they desire on the day or the train on which they wish to travel. Occasionally, they cannot even get seats on certain trains, especially at weekends. But most travelers understand how these things are, and why the railroads cannot always accommodate them as they would wish to do.

"The railroads cannot say who should and who should not travel. That is a matter which each one must determine for himself in the light of circumstances which he alone knows. To those who must travel, however, the railroads suggest planning trips for the less-crowded days of the week and the least congested trains, prompt cancellation of reservations if plans are changed, and traveling 'light'—all to help make the most of the available space on trains."

The same theme dominated a radio round-table discussion May 4 in which

A. A. R. representatives participated. Taking part in this program, which was broadcast over station WWDC in Washington, D. C., were J. Carter Fort, A. A. R. general counsel, M. J. Gormley, executive assistant, and Robert S. Henry, assistant to the president.

While Mr. Fort emphasized the intention of the railroads to take the traveler "where he wants to go and to bring him back," if he considers his trip justified under existing conditions, he pointed out that the passenger must expect "some lowering of the high travel standards which the railroads maintain in peace times." Col. Henry explained how the railroads, with much less equipment than they had during World War I, have been able to set new records in efficiency and transportation as a result of improved plant and advance planning, together with customer teamwork. Mr. Gormley called attention to the part the shipper and receiver of freight has played and must play in keeping freight cars moving and producing transportation "with none of the distress of the last war."

Peaches and Watermelons Exempt from Stops in Transit

Watermelons and fresh peaches have been added by the Office of Defense Transportation to the list of commodities on which railroads are not required to permit stop-over privileges in transit to complete loading or for partial unloading under the provisions of General Order ODT 18, Revised. This additional exception was provided by Amendment 2 to the general order, and was effective April 30.

WPB Stops Track Extensions

Track extensions planned by the Atchison, Topeka & Santa Fe and the New York, New Haven & Hartford were halted April 29 by the War Production Board. The New Haven's project involved construction of 12 additional tracks in the Bronx, New York, intended for storage of materials awaiting shipment, while the Santa Fe's project called for construction of track from Richmond, Calif., to Point Isabel to serve a proposed shipyard which has not yet been biult, the WPB explained.

Additional Grain Agents

The Interstate Commerce Commission on May 4 issued Amendment No. 9 to Service Order No. 80, appointing 11 additional agents to issue permits for movements of grain at 26 markets in Kansas, Oklahoma, Texas, Utah, Colorado, Oregon, and Washington.

Eastman on WPB's Civilian Requirements Policy Committee

Director Eastman of the Office of Defense Transportation, whom President Roosevelt recently appointed to the War Production Board, has been designated by WPB Chairman Nelson as a member of WPB's newly-created Civilian Requirements Policy Committee. The committee was established by Mr. Nelson in his May 2 administrative order which also set up within WPB the Office of Civilian Requirements, superseding the Office of Civilian Supply.

OCR is headed by Arthur D. Whiteside, who was recently appointed to a WPB vice-chairmanship. It is clothed "with the power necessary to provide civilians with essential goods and services;" but its authority does not extend to products and services under the jurisdiction of ODT and others which have independent claimant-agency status. Thus the Civilian Requirements Policy Committee which is designed "to correlate the policies of the government agencies concerned with the supply of civilian goods and services."

Mr. Nelson will be chairman of the committee and Mr. Whiteside vice-chairman. Members in addition to the ODT director are the Secretary of Agriculture, the chairman of the War Manpower Commission, the Price Administrator, and the Petroleum Administrator for War. The War Food Administrator and the administrator of the National Housing Agency "will be invited to sit with the committee."

"Vital" Though "Un-glamorous" Transport Jobs for Women

Several positions in the transportation industry have been included by the Women's Advisory Committee of the War Manpower Commission on a list of "more than 100 un-glamorous everyday jobs" for women which are "as vital to the war as work in an aircraft plant, shipyard, or munitions factory."

The transportation group includes railroad service as conductor, ticket-taker, baggage clerk, information clerk, oiler, engine wiper, track walker, and section hand.

Plan to Limit Beer Shipments Being Considered

A plan to conserve transportation by limiting the number of railroad cars and car-miles in the shipment of beer and other malt beverages is being considered by the War Production Board and the Office of Defense Transportation.

A joint WPB-ODT announcement of May 4 said that the plan, if adopted, would restrict each brewer to a specified quarterly percentage of railroad cars and of car-miles he used to ship beer in the three-month base period, November, 1942, through January, 1943; and prohibit a brewer from circumventing the restrictions imposed on rail traffic by diverting a portion of his deliveries to trucks. The car loading and car-mile quotas would be adjusted for seasonal variation in the distribution of beer.

Tighter Restrictions on Lake Traffic Forecast by ODT

Because weather conditions have seriously delayed opening of navigation on the upper Great Lakes, restrictions on coal, grain and other traffic on lake vessels may be even more drastic this year than in 1942, the Office of Defense Transportation warned in announcing April 30 an extension to May 15 of its temporary suspension of restrictions on lake movements of coal, first ordered in March, as reported in *Railway Age* of March 20, page 597.

No further extension of the suspension can be expected, the ODT indicated. Restrictions on coal and grain traffic were imposed last year to speed the movement of iron ore to lower lake ports, and will be required again to meet the War Production Board's enlarged quota for this year's ore movement, the ODT explained, and the extension to May 15 was authorized only to permit employment of vessels unable to pass through the "Soo" locks because of ice conditions. The first ore carrier from Lake Erie reached Duluth April 24, it was disclosed, but passage of loaded vessels was still impeded at the end of the month.

Restrictions on other traffic, lifted by the March suspension order, were restored

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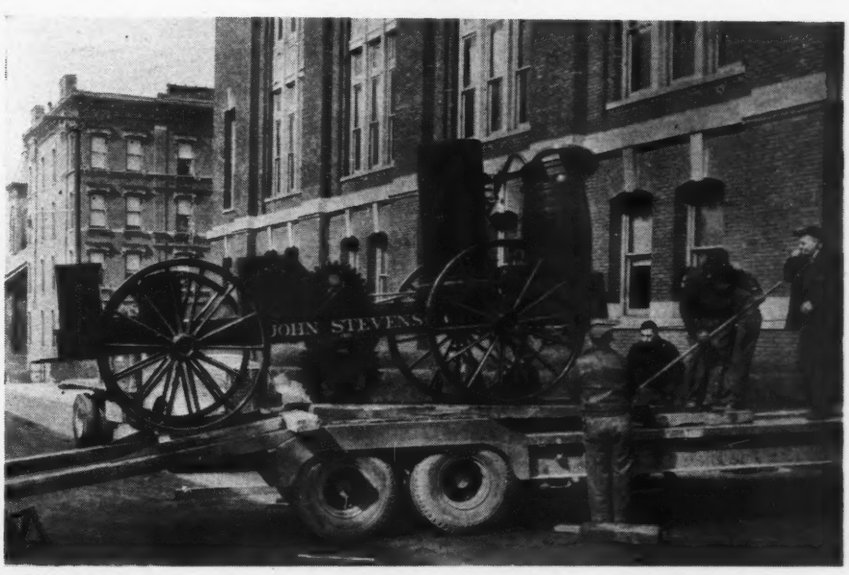


William A. Lucas

Replica of John Stevens Locomotive Moved from Stevens Institute Museum

The museum space at Stevens Institute is to be devoted to war purposes and all exhibits are being removed elsewhere. The John Stevens locomotive replica will make its home for the duration in a P. R. R. shop.

May 3 by Suspension Order ODT 25-4, which has the effect of reinstating last year's permit regulations for lake carriers, with certain modifications. Vessels with gross registered tonnage under 4,400 are temporarily permitted to carry grain without permit under this order, and permit provisions are lifted for ferries carrying railroad cars, automobiles, trucks, or trailers.

Materials and Prices

Following is a digest of orders and notices of interest to railroads issued by the War Production Board and the Office of Price Administration since May 1.

Auto tires—General Limitation Order L-61, as revised April 29, lifted all controls over the distribution of used tire retreading, recapping and repair equipment. In addition, the production and acquisition of new tire retreading, recapping and repair equipment, having a retail value of $85 or less, is now permitted. The original order permitted production and acquisition of tube repair or spot equipment having a retail value of $100 or less. All applications under the new order must be made on Form PD-840.

Auto trucks—Bulletin WPB-3366, issued April 29, outlines the procedure to be followed in obtaining replacement parts for trucks and buses. The repair man must first determine whether or not the old part can be repaired or reconditioned. Where the owner is unable to get a new part from local distributors or a serviceable used part from an automotive scrap yard, he places a purchase order with a dealer. The dealer, in turn, transmits the purchase order to the manufacturer, with or without a Certificate of Emergency, according to the need. Requests to the War Production Board for assistance should give the description and quantity of parts needed; catalog number; where purchase order was placed and any identifying number on it. The owner is expected to hand over to his repair man the broken or worn part for which a replacement has been obtained. The repair man in turn passes on the old part to the dealer or manufacturer if it can be rebuilt, otherwise he scraps it.

Carbon steel—Bulletin WPB-3390, issued May 4, announced that special measures are being taken by the Steel Division of the War Production Board to regulate production of high quality carbon steel. Every effort is being made by the Steel Division to urge buyers to use regular carbon steel in place of the quality grades wherever it is practicable to do so.

Controlled materials—Interpretation No. 5 of CMP Regulation No. 1, announced April 26, explains that orders for controlled materials placed before the purchaser has received his allotments may be converted into controlled materials orders when allotments are received by furnishing the supplier with duplicate copies of the purchase orders, certified as provided in CMP regulations. Orders so converted must be treated as authorized controlled materials orders as of the date on which the certification, including the allotment number, is furnished the supplier, not as of the date on which the order was first placed. However, if the War Production Board has previously expressly authorized the filling of a particular order, it will be treated as an authorized controlled materials order received on the date the authorization reaches the supplier.

Copper—Limitation Order L-270, as amended April 29, places the use of copper in automotive maintenance equipment under restrictions identical with those applying to the use of steel, aluminum and other critical materials. The original order permitted the use of copper in automotive maintenance equipment for conducting electric current, in bearings, bushings and check valves, and where non-corrosive metal is required. When so used, such copper or copper base alloy products had to be reduced to the minimum quantity and minimum gages, sizes and grades necessary for the proper operation of the equipment. Producers cannot use any copper, aluminum, steel or other critical materials, under the amended order, where the use of less critical material is practicable. Conservation Order M-9c, as amended, transfers control of copper for use in the production of automotive maintenance equipment to Order L-270, effective April 30.

Hand tools—Schedule II of Limitation Order L-157, re-issued April 23 to correct several errors, now permits the manufacture of a railroad A. R. E. A. design forged adze with a 9-in. blade and 4-in. cutting edge instead of a 9-in. cutting edge as listed previously. Engineers', blacksmiths' forged light hammers may be made in one style only instead of in one weight and one style.

Linseed oil—Bulletin WPB-3359, issued April 29, announced that a further curtailment in the use of linseed oil for civilian paints will be necessary to balance future supplies of linseed oil against demand. The Paint, Varnish and Lacquer Industry Advisory Committee was told that a list of specific end-uses for protective coatings, if approved by WPB, will be distributed to the trade and used as a dictionary of reference by producers, suppliers, consumers and WPB for the simplification of allocations.

Oxygen—Bulletin WPB 3344, issued April 28, announced that the present shortage of industrial oxygen will continue until early 1944, when it is expected that new plant facilities should be completed. The Oxygen and Acetylene Industry Advisory Committee was told that the present shortage of calcium carbide, now under allocation, probably will prevail throughout 1943, although several new production facilities are scheduled for completion during the next few months. All consumers of these gases must adopt rigid conservation measures, it was pointed out.

Prices

Grain doors—Amendment No. 163 to Supplementary Regulation No. 14 of the General Maximum Price Regulation, effective May 3, expanded methods of pricing grain doors. Producers can now price sales to railroads to whom they did not sell during 1942. The action was taken so that railroads can compete on equal terms for purchases of grain doors. Previous price action was based mainly on a delivered price to a railroad which the producer always supplied. This action allows a grain door manufacturer who in 1942 sold the same kind of a door, but not the railroad which is now making the purchase, to figure a maximum price which returns the same mill realization as the ceiling in sales to railroads to whom he sold during 1942. The action is accomplished by permitting an adjustment to the extent by which the cost of making delivery to the purchasing railroad is greater, or less, than the cost of making delivery to the railroad which purchased the grain doors in 1942. However, the amendment does not change the ceilings established March 27, 1943, to reflect actual advances in labor and material costs since March 1, 1942, for doors delivered on the line of the railroad which purchased from the producer during 1942. The amendment also provides a method for establishing a ceiling for a grain door which a producer did not sell during 1942. The seller is permitted to use as his maximum price the price which governs sales of that type of door to the same purchaser by the closest competitive manufacturer who can figure a price for that kind of door under the previously established pricing formula for grain doors. The amendment eliminates the possibility of wholesalers' markups being added to mill prices. Since sales agents or brokers are normally compensated by the producers, the reseller's ceiling price is the same as the ceiling for the plant which produced and sold the grain doors to him.

Lumber, car—Maximum Price Regulation No. 19 (southern pine lumber), as revised May 1, increased mill ceilings for No. 2 common southern pine boards $1 per m. b. ft. and decreased those of No. 2 common dimension an equivalent amount. Tables and specific prices were established for the first time for some items of car lumber and for other items of car lumber which were priced until now by special formula. All lumber tables in the regulation were revised to contain maximum prices for lengths 4 and 6 ft. long which previously were priced by formula in all but a very few of the tables. A pricing formula is incorporated for lengths under 4 ft. Prices of some of the car lumber items previously specifically covered by the regulation are slightly increased, the chief changes being in sheathing, lining and flooring in select grades to assure continued production of items essential in freight car manufacture. The car lumber prices take into account differences in grade specifications, waste of timber and slowness of production, fractional sizes, special cutting and degrading. Finish previously commanded higher prices even though the lumber going into car material stock is slightly better in grade and of lower moisture content. Since the same lumber could be diverted into items of finish and provide better margins for producers, the position of car lumber constituted a threat to continued production, and the car lumber users might have been compelled to purchase finish items and remanufacture them at great cost into car lumber.

Lumber, hardwood—Amendment No. 5 to Maximum Price Regulation No. 223 (northern hardwood lumber), effective May 4, establishes specific ceilings for various grades of beech lumber. The new ceilings for beech will cover the various thicknesses in FAS Selects, No. 1, 2 and 3A common grades and are in line with the ceilings previously established for No. 2 common and better and No. 3 common of the same species. The action will not change the level of prices for these items but serves to eliminate the necessity of special pricing for these grades for each individual mill. The order raises the price of 2 by 8 in. crossing plank from $30 to $31, the same ceiling as 2 by 6 in. crossing plank and other 2-in. crossing plank. A new table is added to cover miscut hardwoods, extending to all species the differentials in relation to standard grades previously contained in the regulation for miscut hard maple. A provision for pricing small quantities, ranging up to items of 4,000 ft., is similar to small quantity provisions in the other hardwood lumber regulations. Additions are provided for specified widths in No. 3 common lumber in the price table for standard special widths and lengths in all hardwoods.

Track material—Maximum Price Regulation No. 46, issued April 26 with the title Relaying Rail, Relaying Girder Rail and Used Track Accessories, effective May 1, establishes specific prices for used track accessories from 10 to 30 per cent below the mill prices of new accessories, including used angle bars and tie plates, track bolts and spikes. At the same time, prices at warehouses for relaying rail weighing 60 lb. or more per yd. when new are increased $3.84 per gross ton in carload lots, with a quantity limitation on rail weighing more than 70 lb. Previously, used track accessories were under Revised Price Schedule No. 49 (resale of iron or steel products) and no specific prices were established for them. The increased price for relaying rail is limited to quantities of not more than 2 carloads in the case of rail weighing more than 70 lb. per yd. when new. Prices of used angle bars and tie plates are set at percentages of 70 per cent or more of new mill prices with differentials determined by the source and the type of seller. Prices of used track bolts and spikes are approximately 75 per cent and 90 per cent of the new price, respectively. For accessories originating from Class I railroads and Class I switching and terminal companies, prices are established in accordance with custom, f.o.b. any station on the selling railroad at the option of the buyer. Prices per 100 lb. are: joint bars, $1.85; tie plates, $1.50; track bolts and nuts, $3.50; track spikes, $2.70. Dealers or jobbers in direct shipments from Class I railroads may sell used track accessories at prices 25 cents per 100 lb. higher than those listed, f.o.b. shipping point. Used track accessories originating from other sources than Class I railroads and switching and terminal companies are priced, except at warehouses, in relation to basing point cities and quantity differentials. Basing points to be used in establishing maximum prices from shipping points other than warehouses are the 20 cities included in the regulation applying to the sale of relaying rail. Maximum prices per 100 lb. for used track accessories, f.o.b. shipping point, are the specific prices listed in the regulation by quantities, minus the lowest carload railroad charge for transporting the accessories to the nearest basing point from the shipping point siding. The shipping point price need not, however, be less than 80 per cent of the specific prices listed.

GENERAL NEWS

Tracks Cleared for May 15 Rate Cuts

Increase in Ex Parte 148 is suspended—Trucks get no l. c. l. exception

Short form publication of tariffs making effective the freight rate reductions ordered by the Interstate Commerce Commission when it suspended the increases allowed in its Ex Parte 148 proceedings was authorized for the commission by Commissioner Aitchison in a special permission dated April 23, granting this authority to B. T. Jones, agent for the carriers. Subsequent special permissions were granted for the same procedure for tariffs of water carriers and freight forwarders and for shipments of milk and cream in passenger trains.

The form of publication authorized by the commission provides that the increases are suspended during the period May 15 to December 31, both inclusive, and that "the rates and charges as increased again will become effective January 1, 1944." Comment of persons acquainted with commission procedure, however, stressed the fact that the commission could order a suspension of this terminating clause before January 1 if it should meanwhile entertain any doubt that rail revenues have not been sufficiently reduced through other developments to justify resumption of the increased rates.

The petition of the American Trucking Associations seeking to have excepted from the commission's order suspending the increases all rates on l.c.l. and merchandise traffic was denied by the commission in an order following its May 3 session. Other petitions for special exceptions also were denied. The truckers' petition, reported in *Railway Age* of April 24, page 839, was followed by petitions of the Office of Price Administration and the Pennsylvania, among others, objecting that the A. T. A. position was inconsistent and not based on the record in the proceedings. The Pennsylvania pointed out that exception of the l.c.l. rates from the suspension order would result in setting different basic rate scales for carload and l.c.l. traffic.

Increases ordered in Texas rates and fares in the commission's No. 28846 proceedings were suspended by an amendatory order affecting these increases to the same extent as interstate rates were affected by the order in Ex Parte 148. It was indicated that increases in intrastate rates that had resulted from the Ex Parte 148 increases generally would be suspended similarly, though local requirements would sometimes vary the effective dates.

The railroads, through a letter from A. F. Cleveland, vice-president of the Association of American Railroads, to W. P. Bartel, secretary of the commission, on April 29 gave informal notice of their intention to continue in effect certain rates, and also certain charges for transit privileges and out-of-line hauls which were established at the request of government agencies to meet emergency conditions, as authorized by the commission's order of April 6 exempting such rates from suspension.

The emergency rates not subject to suspension apply to specified commodities and to certain routes and territories, including among others petroleum and its products, sulphuric acid in tank cars, old tin cans moving to detinning plants, wool en route from South America and Africa, scrap metal, lead, tin ore and concentrates ferro alloys, shell containers, ammunition boxes, unfinished alcohol, and various chemicals, in all instances applying to certain specified origins and destinations.

Freight Tax Repeal Proposed

Representative Fulmer, Democrat of Carolina, has introduced HR.2593 to repeal the tax on amounts paid for the transportation of property.

Bill Would Provide for Study of Superhighways

Representative Randolph, Democrat of West Virginia, has introduced HR.2615 which would provide for a Public Roads Administration survey "of the need for a system of express highways throughout the United States."

U. P. Has Lowest Casualty Rate

The Union Pacific completed 1942 with a casualty rate among employees of 3.32, the lowest for any railroad working 50 million man-hours or more. In 1941 the rate was 2.78.

Safety Poster for June

The poster issued by the Committee on Education, Safety Section, Association of American Railroads, for the month of June takes the form of a "Prescription for Happiness" and contains the advice—"Let's work safely and live sanely for longer and better lives."

Unemployment Insurance Act Amendment

Senator Chandler, Democrat of Kentucky, has introduced S.1044 to amend the Railroad Unemployment Insurance Act to provide for the refund to railway employees of amounts they paid into certain state unemployment insurance funds prior to the establishment of the federal system.

$209 Million Net Income in 3 Mos.

Net railway operating income for the same period was $341,059,767

Class I railroads in the first three months of this year had an estimated net income, after interest and rentals, of $209,600,000 as compared with $95,137,945 in the first quarter of 1942, according to the Bureau of Railway Economics of the Association of American Railroads. The three months' net railway operating income, before interest and rentals, was $341,059,767, compared with $221,681,983 in the corresponding 1942 period.

In the 12 months ended March 31, the Class I roads had a rate of return of 5.9 per cent on their property investment, as compared with a 3.83 per cent return for the 12 months ended March 31, 1942.

March's estimated net income was $84,900,000, compared with $46,887,970 in March, 1942; while the net railway operating income for that month was $129,647,038, compared with March, 1942's $90,571,693.

Operating revenues in the three months totaled $2,091,164,289 compared with $1,483,477,396 in the same period in 1942, or an increase of 41 per cent. Operating expenses amounted to $1,282,103,531, compared with $1,036,586,797, or an increase of 23.7 per cent.

The March gross totaled $756,250,563 compared with $540,300,226 in March, 1942, while operating expenses totaled $449,440,079 compared with $360,152,483 in the same month in 1942.

Class I roads in the three months paid $422,222,184 in taxes, compare with $188,573,161 in the same period in 1942. For March alone, the tax bill amounted to $161,808,023, an increase of $85,473,494, or 112 per cent above March 1942. Twenty Class I roads failed to earn interest and rentals in the three months, of which nine were in the Eastern district, two in the Southern district, and nine in the Western district.

Class I roads in the Eastern district in the three months had an estimated net income of $77,500,000 compared with $41,082,500 in the same period last year. Their first-quarter net railway operating income was $129,199,605 compared with $88,633,599 in the same period in 1942.

Gross in the Eastern district in the three months totaled $929,020,207, an increase of 30.4 per cent compared with the same period in 1942, while operating expenses totaled $610,787,186, an increase of 19.7 per cent above 1942. March's estimated net income in the Eastern district was $31,-

500,000 compared with $23,390,122 in March, 1942. Net railway operating income amounted to $48,888,770 compared with $38,757,806 in March, 1942.

Class I roads in the Southern district in the three months had an estimated net income of $41,500,000 compared with $22,344,013 in the same period last year. They had a net railway operating income of $58,256,046 compared with $38,842,820 in the same period of 1942.

The Southern district's first-quarter gross was $320,387,787, an increase of 52.5 per cent compared with the same period of 1942, while operating expenses totaled $176,861,364, an increase of 25.4 per cent above 1942.

In the Southern district for March the estimated net income was $15,500,000 compared with $10,198,207 in March, 1942. Net railway operating income amounted to $21,457,850 compared with $16,099,311 in March, 1942.

Class I roads in the Western district in the three months had an estimated net income of $90,600,000 compared with $31,711,432 in the same period last year. Their net railway operating income was $153,604,116 compared with $94,205,564 in the same period in 1942.

Gross in the Western district in the three months totaled $841,756,295, an increase of 50.1 per cent compared with the same period in 1942, while operating expenses totaled $494,454,981, an increase of 28.3 per cent above 1942.

March's estimated net income in the Western district was $37,900,000 compared with $13,299,641 in March, 1942. Net railway operating income amounted to $59,300,418 compared with $35,714,576 in March, 1942.

CLASS I RAILROADS—UNITED STATES

Month of March

	1943	1942
Total operating revenues	$756,250,563	$540,300,226
Total operating expenses	449,440,079	360,152,483
Operating ratio—per cent	59.43	66.66
Taxes	161,808,023	76,334,529
Net railway operating income (Earnings before charges)	129,647,038	90,571,693
Net income, after charges (estimated)	84,900,000	46,887,970

Three Months Ended March 31

Total operating revenues	$2,091,164,289	$1,483,477,396
Total operating expenses	1,282,103,531	1,036,586,797
Operating ratio—per cent	61.31	69.88
Taxes	422,222,184	188,573,161
Net railway operating income (Earnings before charges)	341,059,767	221,681,983
Net income, after charges (estimated)	209,600,000	95,137,945

New Buses No Longer Subject to Mileage Limitation

Limitations on monthly mileage run by new buses put in service since July 31, 1942, have been lifted as of May 1, the Office of Defense Transportation announced this week. Heretofore such buses in inter-city service were not permitted to exceed 6,000 miles per month, under the requirements establishing the ODT bus "pool" through which they were made available. Other restrictions affecting buses in the pool were not affected by this action, the ODT pointed out. The mileage limitations were lifted, it was explained, because older buses are rapidly becoming less available for regular service due to delays in making necessary repairs, especially where parts are obsolete.

Railroad Dividends Up

Railroads comprised "the only major industry" to show an increase in cash dividend payments for the first quarter of 1943 as compared with the same 1942 period, according to a May 4 press release from the Department of Commerce. The figure was 35.9 million dollars as compared with 24.8 million dollars, an increase of 45 per cent.

Co-ordinate Sleeping Car Service

The Alton and the Illinois Central, on May 1, co-ordinated sleeping car service on midnight trains between Chicago and Springfield, Ill. Sleeping cars are now operated on a staggered basis with the Alton handling them for two months and the Illinois Central for one month, alternately. Under the plan two more sleeping cars are released for military movements.

Free Transportation Restricted on Holidays

Free transportation will not be honored on Western railroads for Memorial Day, May 28-31; Fourth of July, July 2-5; and Labor Day, September 3-6, except for trips made because of company business, illness or death, students going home or returning to school; employees in military service traveling between military posts and their homes on furlough; and wife and dependent children of an employee in military service traveling to visit such employee at a post. A resolution to this effect was adopted by the Western Association of Railway Executives on April 23.

Senate Committee Rejects Florida Canal

The Senate committee on appropriations this week voted to report the War Department Civil Functions Appropriation Bill for the fiscal year ending June 30, 1944, without providing any funds for construction of the proposed Florida Barge Canal. In acting thus the committee rejected the recommendation of its subcommittee which had held hearings on the bill.

The subcommittee had approved an appropriation of $28,000,000 for beginning work on the project for which proponents had sought $44,000,000. Just as was the case before the House subcommittee, the Senate subcommittee's hearings on the bill were dominated by the controversy over the canal.

Probe of U. S. Freight's Interest in Truck Line

The Interstate Commerce Commission has instituted an investigation into the relationship between the United States Freight Company, parent corporation of the Universal Carloading & Distributing Corporation, and the Interstate Motor Freight System. The purpose of the investigation is to determine whether the United States Freight's investments in Interstate have been made in violation of the Interstate Commerce Act.

The proceeding is docketed as No. MC-F-2181, and the list of respondents includes former Interstate Commerce Commissioner B. H. Meyer who since 1939 has been trustee for the United States Freight Company stock owned by affiliates of the New York Central.

March Earnings in Canada

The two principal Canadian railways reported March earnings and expenses as follows:

Canadian National

March	1942	Increase
Gross	$36,100,000	$7,394,000
Expenses	28,215,324	5,932,772
Operating Net	$7,884,676	$1,461,228
3 Months		
Gross	$95,707,000	$16,084,000
Expenses	78,227,000	13,829,000
Operating Net	$17,480,000	$2,255,000

Canadian Pacific

March		
Gross	$24,021,211	$3,274,754
Expenses	20,403,792	3,443,270
Operating Net	$3,617,419	$168,516
3 Months		
Gross	$63,282,657	$5,637,813
Expenses	54,605,215	6,944,382
Operating Net	$8,677,442	$1,306,569

Club Meetings

The American Transit Association held a conference on wartime transit problems at the Hotel New Yorker, New York, on May 5-6 and 7. At the May 7 session, L. M. DeTurk, manager service and parts sales, of the J. G. Brill Company, Philadelphia, Pa., led the open forum discussion on "Problems of Equipment Parts Manufacturers."

The Traffic Club of Newark (N. J.) will hold its annual dinner-dance at the Robert Treat hotel on Saturday, May 15.

In the interest of the war effort, the New England Railroad Club has decided to cancel the annual banquet and entertainment originally scheduled to be held during the month of May. Monthly meetings, which are educational, will be continued, and the next meeting will be held on October 5.

State Authority Not Essential For Grandfather Rights

Even though a truck operator's state certificate did not authorize operations over certain routes or portions of routes, the fact that he was of the opinion that he had such authority and had so operated "openly without any subterfuge" and without interference since before January 1, 1935, supports the conclusion that the operations were bona fide, Division 5 of the Interstate Commerce Commission has found in a modified report and order granting "grandfather" rights as a common carrier to Jackson-Strickland Transportation Company over specified routes between Houston and San Antonio, Tex., and Oklahoma City and Tulsa, Okla., and intermediate points. Commissioner Patterson

dissented from this conclusion of the division's majority, Commissioners Lee and Rogers. In addition to objections based on the alleged lack of state authority for operations on certain routes, protestants in this case also opposed the application for a commission certificate permitting operations between points within the state of Texas, on the ground that the operator's Texas permit did not allow such operations. The division found that such a restriction would be "impractical and unreasonable in respect of interstate commerce," and noted the applicant's claim that the restriction in the state permit was intended to cover intrastate traffic.

Representation of Employees

Reporting on recent representation-of-employees cases, the National Mediation Board has certified the National Organization Masters, Mates & Pilots of America, as the representative of captains employed in the New Orleans, Texas & Mexico's marine department, and the International Brotherhood of Firemen, Oilers, Helpers, Roundhouse & Railway Shop Laborers, operating through the Railway Employees Department, American Federation of Labor, as representative of the Georgia's powerhouse employees and railway shop laborers. In another proceeding, the Brotherhood of Sleeping Car Porters retained the right to represent Missouri Pacific train porters, beating out by a 93-to-34 vote the challenging Brotherhood of Trainmen, Brakemen & Porters, Inc.

Law Not Altered by Purchase of Rights, Says I. C. C.

Finding that the application of the Interstate Motor Freight System for authority to purchase certain truck operating rights of Hugo Redhage did not request an enlargement of operating rights involved so as to eliminate backhauls and circuitous routing, Division 4 of the Interstate Commerce Commission, with Commissioner Porter dissenting, has denied the application as not in the public interest.

The Interstate System at present as part of its regular service in 18 states operates trucks through certain points in Madison and St. Clair counties, Illinois, in the vicinity of its St. Louis, Mo., terminal, where large plants for the manufacture and distribution of supplies essential for the war are located, the division's majority, Commissioners Mahaffie and Miller, points out in its report, but previous denial by the commission of certain of Interstate's claimed "grandfather" rights had made it necessary for these plants to use multiple-line service for shipments by truck to "substantially all points" in Michigan, Indiana, and Pennsylvania, and to many points in Ohio. At St. Louis Interstate interchanges freight with other carriers, including Redhage, whose operating certificate covers the territory in which the war plants are located.

Under what the majority called "the mistaken impression" that unification of Interstate's rights with certain rights of Redhage to operate in the two counties involved would enable the former to serve points in these counties "as intermediate or off-route points in connection with its present routes," Interstate contended that such unification would eliminate interchange, reduce transit time, eliminate backhauls, and in some instances result in lower rates. The majority found, however, that under the combined authority traffic moving to or from the points involved still could be lawfully handled only through St. Louis.

This viewpoint, Commissioner Porter contended, creates "incongruous situations" that amount to a curtailment of the rights now held by the two operators, where Interstate after unification would have less than the sum of the two sets of existing rights. This "questionable exercise of power," said the dissenting commissioner, will make applicants hesitant about undertaking proceedings of this nature.

Commerce Department Sees '43 Traffic Up 16 Per cent

The combined physical volume of commodity and passenger transportation in 1943 is expected to exceed that of last year by approximately 16 per cent, according to latest Department of Commerce estimates.

"During the first quarter of 1943 the combined aggregate of passenger-miles and ton-miles was 28 per cent above the same period of last year," the Department said in a May 5 statement. "With many types of transport agencies utilizing their equipment at capacity or near capacity, gains during the remainder of this year cannot be expected to continue as high as 28 per cent.

"Total commodity transportation this year—measured by the Department of Commerce index of ton-miles—is expected to increase by 12 per cent. In 1942 the index for total passenger transportation—by rail, air, motor bus and local transit—increased by 45 per cent over 1941. In the first quarter of this year the increase was 52 per cent over the corresponding quarter of 1942. For 1943 as a whole passenger transportation is expected to be almost one-third above the 1942 record.

"Based on the 1943 expected shipments of industrial and agricultural products, railroad net ton-miles are expected to aggregate 710 billions, compared with 638 billions in 1942, a rise of 11 per cent. For the first quarter of this year rail ton-miles were 25 per cent above the same quarter of 1942, but gains made during the remainder of the year are expected to be measurably less.

"By far the greatest increase in freight traffic in 1942 occurred in air transport, which showed a gain of 72 per cent over 1941. This was largely the result of sharp increases in air mail pound-miles. The upward trend continued into 1943, with first quarter ton-miles showing an increase of 80 per cent over the same period in 1942. Present indications point to an increase of about 50 per cent over the 1942 record.

"The domestic water-borne commerce index consisting of coastwise and inland traffic will probably be about five per cent lower in 1943 than last year. The sharp gains expected in river traffic will be offset by the decline in coastal trade and the complete stoppage of intercoastal traffic.

"The brightest picture in water-borne commerce is presented by the traffic on rivers. The construction of new barges is being pushed with the promise of the heaviest petroleum movement on record and some diversion of other bulk commodities from the hard pressed rail and motor carriers. The total river performance may be as high as 20 per cent above last year."

Cement Carrying Cars Adapted for Transporting Petroleum

In an article on the Eastern Oil movement in the *Railway Age* of April 17, page 794, the statement was made that 100 steel gondolas formerly used as cement carriers were being fitted with steel tanks for transporting petroleum. This is not correct. These L. C. L. Corporation cars were equipped with Air Activated containers, as shown in the illustration.

The conversion of these containers to carry petroleum, instead of cement, proved to be a comparatively simple operation. It required only the changing of rubber gaskets to fibre gaskets, primarily because of the necessity of conserving the rubber gaskets for later use when reconverting the cars for cement handling; also, the plugging up of inlet valves and the proper stopping up of outlets, etc. Up to the time of conversion, which was completed early this month, these cars had been used in cement traffic for five years.

Each of the five tanks in the car shown in the illustration will hold 1,750 gal., or a

L.C.L. Corporation Air Activated Containers Which Have Been Converted from Cement to Petroleum Carriers

total of 8,750 gal. per car. Other cars, fitted with six containers, each holding 1,695 gal., have a total capacity of 10,170 gal.

January Bus Revenues 81.8 Per Cent Above January, 1942

Class I motor carriers of passengers reported January revenues of $26,131,199 as compared with $14,373,623 in January, 1942, an increase of 81.8 per cent, according to the latest monthly compilation prepared by the Interstate Commerce Commission's Bureau of Transport Economics and Statistics from 170 reports representing 175 bus operators. Passengers carried were up 94.9 per cent, from 21,539,010 to 41,975,287.

	Passenger Revenue		Passengers Carried	
	January 1943	January 1942	January 1943	January 1942
New England Region	$1,231,386	$654,651	3,933,043	1,918,545
Middle Atlantic Region	2,819,189	1,589,407	7,071,254	3,761,671
Central Region	3,675,870	2,347,694	7,275,964	3,974,835
Southern Region	7,462,460	3,979,548	10.677.841	5,359,107
Northwestern Region	610,453	475,276	614,057	407,876
Mid Western Region	2,136,957	1,157,410	1.986,045	972,081
Southwestern Region	4,348,888	2,104,510	6,244,146	2,577,615
Rocky Mountain Region	314,812	155,125	246.997	116,975
Pacific Region	3,531,184	1,910,002	3,925,940	2,450,305

The breakdown by regions of the bus revenue and traffic figures, which exclude data on charter or special party service, is given in the accompanying table.

RRs May Allow Loading Charge on Selected Routes

Railroads may discontinue a loading charge on Oklahoma cotton shipped from concentration points to Texas Gulf ports while continuing such charge on shipments from the same points to destinations in the Southeast without violation of the unjust discrimination and undue prejudice provisions of the Interstate Commerce Act, the United States Supreme Court held in an opinion delivered by Chief Justice Stone on May 3. Four justices dissented from the majority opinion, however.

In this case—*Barringer* versus *United States*—the court's majority upheld the decision of the Interstate Commerce Commission and the federal district court. As a result of truck competition, the railroads involved had filed tariffs with the commission relieving shippers to certain ports from the loading charge while leaving the charge in effect to certain sections where no truck competition existed, and the commission had found the "circumstances and conditions" sufficiently different in the two situations to authorize the tariffs as not unjustly discriminatory within the meaning of Section 2 of the XX Act. This conclusion the court could find unwarranted, the majority opinion held, only if shown to be unsupported by the evidence or based on an erroneous construction of the statute, and in this case, pointing out that "it has long been established by our decisions that differences in competitive conditions may justify a lower line-haul charge over one line than another," it did not so find.

The dissenting opinion, in which Justice Douglas was joined by Justices Roberts, Black and Reed, held that "the fact that different rates for carriage are warranted does not necessarily mean that different rates for identical accessorial charges in connection with the carriage are justified." The dissenters also disagreed with the commission's view that the discrimination provisions of Section 2 do not apply where the line-hauls are not over the same line, for the same distance, and to the same destination.

"A carrier," said Justice Douglas, "which is loading two cars at the same time, on the same siding, with the same commodity is indeed performing the same service under the same circumstances and conditions. To charge the first shipper for loading his car and to load the other one free would be to impair the rule of equality which Section 2 was designed to inaugurate. . . . The result in the present case is a gross discrimination against shippers to the Southeast."

To the argument that, since the loading charge is a component part of the total line-haul charge, changes in the charge for this accessorial service may be treated the same as if the line-haul tariff were in issue, the dissenters contended that such an adjustment in accessorial charges would result in an indirect method of adjusting line-haul rates, "not permitted under this statutory system." Congress has prescribed the procedure for obtaining such adjustments, they pointed out, and "we should not allow the procedure . . . to be circumvented through the rebate route."

March Locomotive Shipments

March shipments of railroad locomotives totaled 286, including 202 steam and 84 Diesel-electrics, as compared with 219 in February and 125 in March, 1942, according to reports made by builders, other than railroad shops, to the Department of Commerce's Bureau of the Census. Unfilled orders at the end of March totaled 2,296 locomotives, compared with 1,973 at the end of February, and 1,332 as of March 31, 1942.

Shipments for this year's first three months totaled 664 locomotives, including 461 steam, three electrics and 200 Diesel-electrics. In the first quarter of 1942, shipments totaled 314 locomotives, including 104 steam, six electrics, 185 Diesel-electrics, and 19 of other types.

Data supplied by the Car Service Division, Association of American Railroads, on locomotive building in railroad shops show that 13 locomotives, including 10 steam and three electrics, were thus produced in March, as compared with 18 in February and nine in March, 1942. During the first quarter, railroad shop production totaled 48 locomotives, including 42 steam and six electrics, as compared with 19, including 14 steam and five electrics, in the corresponding 1942 period. At the end of March, railroad shops had unfilled orders for 111 locomotives, as compared with 92 as of the end of February, and 79 as of March 31, 1942.

Freight Car Loading

Loadings of revenue freight for the week ended May 1 totaled 788,783 cars the Association of American Railroads announced on May 6. This was a decrease of 5,411 cars, or 0.7 per cent, below the preceding week, a decrease of 70,128 cars, or 8.2 per cent, below the corresponding week last year and a decrease of 5,516 cars, or 0.7 per cent, below the comparable 1941 week.

Loading of revenue freight for the week ended April 24 totaled 794,194 cars and the summary for that week, compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loadings

For the Week Ended Saturday, April 24

District	1943	1942	1941
Eastern	156,426	172,388	160,102
Allegheny	173,518	192,293	154,993
Pocahontas	55,693	58,140	16,814
Southern	120,771	133,116	106,762
Northwestern	97,271	125,373	127,368
Central Western	118,406	116,651	106,566
Southwestern	72,109	63,396	49,022
Total Western Districts	287,786	305,420	282,956
Total All Roads	794,194	861,357	721,627
Commodities			
Grain and grain products	45,216	35,677	33,763
Live stock	15,156	13,785	12,540
Coal	164,978	169,662	39,440
Coke	14,533	14,045	9,141
Forest products	43,189	51,260	40,432
Ore	35,383	70,911	75,385
Merchandise l.c.l.	98,566	123,586	161,983
Miscellaneous	377,173	382,431	348,943
April 24	794,194	861,357	721,627
April 17	780,908	846,505	708,793
April 10	789,018	814,096	679,808
April 3	772,133	829,038	683,402
March 27	787,360	808,286	793,803
Cumulative Total, 17 Weeks	12,796,168	13,507,198	12,180,615

In Canada.—Carloadings for the week ended April 24 totaled 60,647 as compared with 66,912 for the previous week and 63,802 a year ago, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
April 24, 1943	60,647	38,309
April 17, 1943	66,912	38,860
April 10, 1943	66,544	40,259
April 25, 1942	63,802	32,723
Cumulative Totals for Canada:		
April 24, 1943	1,034,249	622,920
April 25, 1942	1,045,297	542,455
April 26, 1941	931,067	487,418

Solid Fuels Co-ordinator Made Administrator

President Roosevelt on April 19 by executive order established a Solid Fuels Administration for War, replacing the office of Solid Fuels Co-ordinator, so giving Harold L. Ickes wider powers over policies, plans and programs intended to assure optimum operation of all branches of the solid fuels industries. Supplementing his former advisory powers, Mr. Ickes

is now authorized to issue directives to the industry, but his jurisdiction was not extended to wage negotiations.

Under the terms of the order Mr. Ickes is charged with the duty to determine, in consultation with the War Production Board, the areas and the times within which rationing of such fuels should be effective, and the amounts to be made available. He also is directed to recommend for the solid fuels industries maximum price adjustments to the Office of Price Administration, manpower requirements to the War Manpower Commission, critical material requirements to the WPB, and transportation requirements to the Office of Defense Transportation.

Beginning his expanded duties, Mr. Ickes on April 28 announced the inauguration of a new government and industry program to get users of bituminous coal to place their orders now and store their requirements as the mines and railroads are able to make supplies available through the warm season so a shortage will not develop next winter.

Pullman Launches First Naval Patrol Vessel

On May 2 the Pullman-Standard Car Manufacturing Company launched the first of a new design of naval patrol vessel and the first ocean-going patrol craft ever built in Chicago. The new vessel, about 180 ft. long and designated a PCE (patrol craft escort) by the Navy, is built for unlimited ocean service and will be equipped for anti-submarine warfare.

The new naval patrol vessel is the eleventh major item of armament being manufactured by Pullman-Standard, which also produces tanks, howitzer carriages, trench mortars, bombs, large calibre shells, parts for anti-aircraft gun mounts, wings for giant Douglas cargo planes and freight cars for the Army, Navy and the railroads.

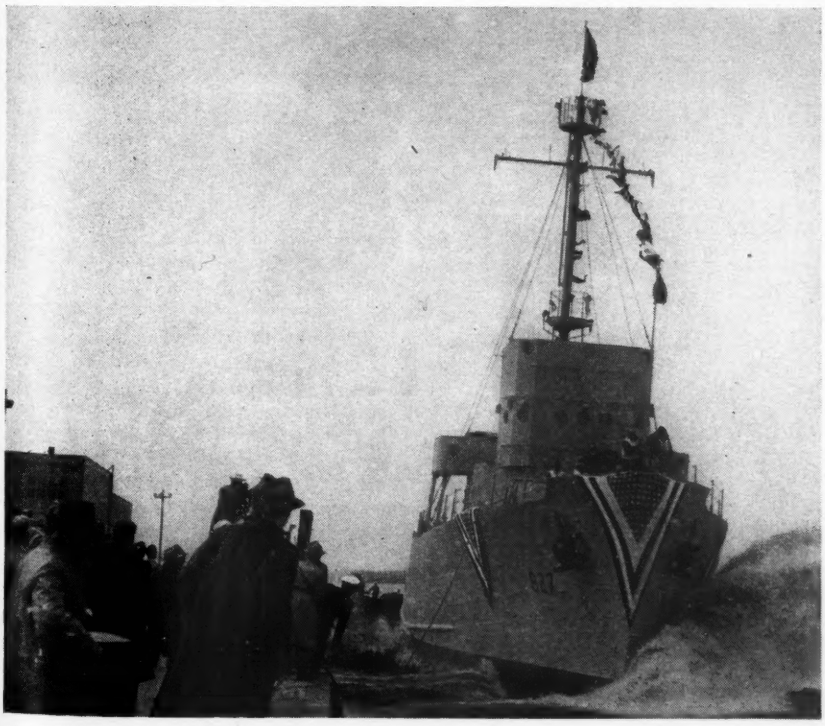
The vessels reflect the ingenuity of Pullman-Standard in developing new methods of production. They are constructed in 14 sections, each completed in order at the plant on systems of jigs. The sections are then moved from the plant on underslung freight cars to the launching ways four miles away. The building ways accommodate 12 vessels at one time.

The sideways launching of the vessel, with appropriate ceremonies, was attended by a large group of guests, Navy officers, Pullman officers and shipyard workers. Commander Eugene E. Paro, hero of the submarine evacuation of army and navy personnel from Corregidor, addressed the assemblage. He urged speed in building submarine patrol craft and told the shipyard workers that submarines are "the greatest menace to ultimate victory."

Calling attention to the severe disappointment of fighting men when vital supplies and armaments are lost through convoy sinkings by submarines, C. A. Liddle, president of Pullman-Standard, declared, "This vessel we are launching today—and its sister ships soon to follow—will help reduce these losses." He related how production of the new ships was speeded when the company proved that railway car builders could adapt their skills to overcome a severe shortage of loftsmen. "We set up schools, with template makers from the car shops as the nucleus organization," he explained. "We employed an expert loftsman as instructor. To our amazement—and to his, he reported after two or three days, that our men had caught on so readily and so well that he had nothing more to teach them."

Frank M. Gunn, manager of works in charge of the company's shipbuilding activities, acting as master of ceremonies, revealed that the last ship of the present order would be launched, barring incidents beyond the company's control, considerably ahead of the date which at first was thought possible.

Miss Blanche E. Bedford, a company employee with a record of 44 years of continuous service, acted as sponsor and The Most Rev. Bernard J. Sheil, auxiliary Bishop of Chicago, gave the invocation.



The Midwest's Contribution to Anti-Submarine Warfare
The first patrol vessel to be built in the Chicago area is launched by Pullman-Standard.

A. A. R. Board Meeting

Directors of the Association of American Railroads, holding their regular monthly meeting in Washington, D. C., on April 30 devoted much of the session to discussion of the passenger situation in which connection they assured Director Eastman of the Office of Defense Transportation that the railroads would cooperate in the current ODT drive to eliminate "unnecessary travel." Mr. Eastman spoke at the meeting, outlining ODT plans for a publicity campaign to promote "voluntary renunciation of unnecessary travel" on the part of the public, as he had put it in his April 28 address before the annual meeting of the Chamber of Commerce of the United States at New York.

Some railroad publicity and advertising in connection with the campaign may be of the "don't travel" variety, but some is expected to avoid telling people to keep off trains while at the same time urging them to consult the railroads in an effort to plan trips for times when the congestion is not great. The view that advertising of the latter type would be the most effective was expressed by Ralph Budd, president of the Chicago, Burlington & Quincy, in a talk at the Chamber of Commerce meeting.

Meanwhile, it was stated after the A. A. R. board meeting that any thought of travel controls was "expressly disclaimed"; since there was general agreement that such would be "totally impracticable and impossible." Also, it was stated that there was a lot of talk about the rail situation which was generally appraised as "not satisfactory." As noted in the *Railway Age* of May 1, page 867, Mr. Budd, in his Chamber of Commerce talk, put track rail first among the things which the railroads need "vitally."

Trucker Can't Enlarge Rights Under Grandfather Clause

Upholding the Interstate Commerce Commission and the federal district court, the United States Supreme Court on May 3 handed down its opinion in a case—*Noble* versus *United States*—clarifying the duties of the commission in specifying the business and scope of contract carrier truck operators under the "grandfather" clause of part II of the Interstate Commerce Act.

The contention of the carrier was that, "once the territory which he may serve and the commodities which he may haul have been determined, he should be allowed to haul these commodities for any one he chooses within those territorial limits." The commission held, and the court agreed,

that it was required by Section 209(b) of the law to indicate "the exact and precise character of the service to be rendered by such carrier," which frequently can be defined accurately "only in terms of the type or class of shippers served."

Any other interpretation of the statute, said Justice Douglas, delivering the opinion, would allow a "basic alteration in the characteristics of the enterprise of the contract carrier," with the result that "he who was in substance a highly specialized carrier for a select few would be treated as a carrier of general commodities for all comers, merely because he had carried a wide variety of articles." For all practical purposes, that is, the effect would be a conversion of a contract carrier into a common carrier, "a step which would tend to nullify a distinction which Congress has preserved throughout the Act."

There was no dissent from the court's opinion. Justice Murphy did not participate in the case.

Wins Out Over C. I. O.

Railroad brotherhoods have supplanted the Congress of Industrial Organization's Utility Workers Organizing Committee as the duly-designated Railway Labor Act representatives of train and engine service employees on the Smoky Mountain, according to results of recent investigations and checks of representation authorizations made public by the National Mediation Board. The Brotherhood of Locomotive Firemen & Enginemen won the right to represent engineers, firemen, and hostlers, while the Brotherhood of Railroad Trainmen has become the representative of road conductors and road brakemen.

Results of recent elections show that on the Kentucky & Indiana Terminal, the Brotherhood of Locomotive Engineers retained the right to represent locomotive engineers, beating by a vote of 32 to 29 the challenging Brotherhood of Locomotive Firemen & Enginemen. On the Alabama, Tennessee & Northern, the Order of Railway Conductors successfully met a challenge from the Brotherhood of Railroad Trainmen, retaining the right to represent road conductors. The vote was 13 to 3.

The Board dismissed without prejudice the B. of R. T. application for settlement of an alleged dispute over representation of New Orleans Terminal yardmasters, now represented by the Railroad Yardmasters of America; the mediator's comparison of representation cards submitted by the B. of R. T. with the payroll records of the company showed "only a minority of the yardmasters apparently desired a change in representation." Meanwhile, the B. of R. T. has won the right to represent yardmen (conductors or foremen, brakemen or helpers) employed by the Fore River.

Smoking Main Cause of Fires

A recent study by the Railroad Insurance Association, New York, disclosed that over 50 per cent of the total fire loss on railroads insured by that association were caused by careless smoking. As a result, the association issued a poster calling attention to the fact that fire loss due to such careless smoking is especially serious at this time when railroad facilities are so badly needed for the transportation of vital war materials. Thus far over 20,000 of these posters have been distributed to railroad officers and employees. Copies may be secured from the association at 80 Maiden Lane, New York.

U. S. Chamber Adopts Transport Resolutions

Pronouncements calling for wartime transport conservation and Congressional action "to insure development of a long-term program for placing essential railroad transportation on a stable basis" were among some 35 resolutions adopted by the Chamber of Commerce of the United States at its annual meeting in New York last week. Transportation discussions at the meeting, which included an address by Director Eastman of the Office of Defense Transportation and a round-table conference, were reported in the *Railway Age* of May 1, page 867.

The "Railroad Transportation" resolution reads as follows:

> The railroads are among the largest employers and taxpayers of the country and the heaviest buyers of a great variety of supplies and equipment. Improvement in the situation of the railroads in the post-war period will bring many public benefits. They have during the war period shown their essentiality and their capacity to perform a great public service. Steps should be taken promptly by Congress to insure development of a long-term program for placing essential railroad transportation on a stable basis. On the other hand, proposals for federal and state legislation which would further interfere with the proper functions of management or impose additional financial burdens should be resisted. Examples relate to length of trains, full crews, and a six-hour day. The federal government itself should give up the preference it enjoys because of grants of public land to aid original railroad construction. The government has long since realized in this reduction of rates more than the value of the grants.

The resolution on "Wartime Transport Conservation" has this to say:

> The unprecedented volume and dislocations of domestic freight and passenger movement place a duty upon everyone to do his part toward attaining the most effective use of every kind of transportation. Shippers and carriers should continue their cooperation in conservation of time and space. Truck operators should go further with their joint efforts to reduce mileage and empty movements. Inland water carriers should seek the fullest utilization of their facilities. Travel for business and personal purposes should be reduced to a minimum, and scheduled to avoid week-end and other peaks of passenger travel. Maintenance of the daily transportation of workers between their homes and their work requires intensified cooperation. Government agencies using transportation should be diligent in their adherence to these principles of conservation, and those responsible for allocation of critical materials should fully recognize transportation as a vital and indispensable element in our war effort.

Among the other resolutions were those calling for elimination in the post-war period of government competition with private enterprise and discontinuance of the practice "of making subsidy payments through the operation of government corporations." The resolution on "Labor Legislation" asserts that the Labor Relations Act, the Wage-Hour Act, and the Railway Labor Act "have now had such results that Congress should create a joint committee to examine the rights of employees, the rights of employees exercised through organization, the rights of employers, and the rights of the public." It goes on to call for legislative action to require financial reports from labor organizations; to make the unions "subject to regulation that will prevent monopolistic practices injurious to the public"; and to give a right to have court review of all decisions of labor-law administrators not now subject to appeal.

Eric A. Johnston of Spokane, Wash., was reelected president of the Chamber for another one-year term.

Equipment and Supplies

Thinks Industrial Locomotive Situation Will Improve

With new war plant requirements tapering off, older plants will have the opportunity to bolster their heavily loaded motive power with new locomotives, but deliveries will run from eight to ten months from date of order, according to F. H. Craton, who is in charge of industrial haulage sales for the General Electric Company. Mr. Craton recently returned from a six months' leave during which time he served with the WPB in Washington.

The industrial locomotive business expanded tremendously from 1939 to 1942, according to Mr. Craton, because of the war. The greater part of this expansion was in the production of Diesel-electric switchers—although only a small proportion of these units went to already established domestic industry because of the enormous requirements of new war plants.

"Hundreds of industrial Diesel-electric locomotives were built on a stock basis by General Electric during the last 3 years under the Production Requirements Plan," said Mr. Craton. "This made motive power available to customers on short notice, and permitted maximum locomotive production to cope with the emergency. Under the new Controlled Materials Plan stock locomotive production cannot be continued. This means that henceforth all users of locomotives must anticipate their requirements and place orders 8 to 10 months in advance, instead of only 4 or 5 months as in the past."

Mr. Craton believes that unless industrial users understand this situation many of them may be faced with a serious shortage of motive power.

LOCOMOTIVES

THE CHESAPEAKE & OHIO is inquiring for ten Mallet-type locomotives of 2-6-6-6 wheel arrangement.

THE BESSEMER & LAKE ERIE has received WPB approval of its order for ten 2-10-4-type steam locomotives, placed with the Baldwin Locomotive Works, and reported in the *Railway Age* of March 6.

FREIGHT CARS

THE ANN ARBOR is reported to be inquiring for 50 hopper cars of 50 tons' capacity.

IRON AND STEEL

THE NEW YORK, ONTARIO & WESTERN has placed an order for 504 gross tons of rail with the Bethlehem Steel Company.

SIGNALING

THE CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS (New York Central Lines) has placed an order with the Union Switch & Signal Co. covering three Model 31 electro-pneumatic car retarders totaling 287 rail-feet of retardation for installation in the Sharonville classification yard, near Cincinnati, Ohio.

Supply Trade

Robert L. Johnson has been elected a director of the **Armstrong Cork Company**, Lancaster, Pa. Mr. Johnson is president of Temple University.

The Lufkin Rule Company, Saginaw, Mich., has been awarded the Army-Navy "E" for excellence in the production of war material.

The Army-Navy "E" award was presented to the Moore Steam Turbine division of the **Worthington Pump & Machinery Corp.** on March 12. The ceremonies took place at the company's plant at Wellsville, N. Y.

Ceremonies for the presentation of the Army-Navy "E" award to the **Rockford Machine Tool Company**, Rockford, Ill., were held on April 28. The award flag was presented by Captain H. L. Pence of the Navy and was accepted by H. B. Newton, president of the company.

H. Arnold Giles has been appointed manager of the general transportation division of **L. C. Chase & Co.**, New York, succeeding **Eldon R. Campbell**, who has resigned. Mr. Giles has been with the company 21 years, being directly associated with its Velmo fabric division and, in later years, concentrating on the bus and aircraft division.

At special meetings of the preferred and common stockholders of the **Canadian Car & Foundry Co.**, held in Montreal, the plan for liquidation of arrears of dividends on preferred shares was approved by overwhelming majorities, while motions providing for certain modifications in the plan were defeated by equally wide margins. Holders of 372,954 preferred and common shares were present in person or by proxy (approximately 58 per cent of the combined total outstanding).

E. D. Youmans has been elected vice-president and technical director of the **Okonite Company**, Passaic, N. J. He has also been elected to the same position in the **Okonite-Callender Cable Co., Inc.**, of Paterson, N. J. Mr. Youmans was formerly technical manager of the Okonite Company's research laboratory. He will now have charge of co-ordinating the entire technical research of these two organizations, and also of Okonite's Hazard Insulated Wire Works Division in Wilkes-Barre, Pa. He started to work in the Okonite laboratories in 1913, at the same time securing his chemical education by attending evening classes at the Brooklyn Polytechnic Institute. He was appointed technical manager of Okonite in 1928 and has taken an active part in the preparation of standards and specifications in the National Electrical Manufacturers Association, the American Society for Testing Materials and the American Standards Association, having served as chairman of numerous committees in these organizations. He also did considerable work on the wire and cable requirements of the 1940 Edition of the National Electrical Code and is now co-operating with the War Production Board Rubber Director's Office, the U. S. Navy and the U. S. Army, in connection with the conservation of rubber.

Carl E. Johansson, assistant to the engineer of car construction and mechanical assistant to the chief mechanical officer of the Chesapeake & Ohio, the New York

Carl E. Johansson

Central and the Pere Marquette, has resigned to become assistant to the chief engineer of the **Youngstown Steel Door Company.** Mr. Johansson was born in Hoganas, Sweden, on November 23, 1896, and was educated at Malmo Technical College at Malmo, Sweden. He began his business career in this country in 1928 with the Kulhman Car Company. He subsequently had additional engineering experience with the White Motor Company, and in 1935 joined the Nickel Plate in the office of engineer of rolling stock. He served with the Advisory Mechanical committee for the Van Sweringen roads as draftsman, in 1937 became chief draftsman, and in 1943 was appointed to the position he is now relinquishing to become assistant to the chief engineer of the Youngstown Steel Door Company.

Horace E. Coyl, Donald H. Smith, and **William J. Stebler** have been elected vice-president of the **General American Transportation Corporation. Cyrus L. Philipp,** vice president in charge of the operation of refrigerator cars including those of the Union Refrigerator Transit Lines, will direct the company's sales. O. J. Parks has been appointed mechanical assistant to the first vice-president and **Edward J. Campbell** has been appointed chief maintenance officer. **J. C. Acworth** has been appointed assistant vice-president.

R. B. Stone, district representative of the Eastern division of the **Peerless Manufacturing Corporation,** with headquarters at Philadelphia, Pa., has been promoted to manager of the Railway division.

Personnel formerly associated with Federal-American Cement Tile Company have formed the **Cement Tile Corporation,** with offices in Chicago. The officers of the new company are **C. S. Freund,** president; **L. J. Wilhartz,** vice-president; **A. Isherwood,** secretary and sales manager; **V. E. Baird,** treasurer and chief engineer; and **O. R. Pritchett,** assistant secretary and plant manager.

OBITUARY

Wellington B. Lee, who retired in 1942 as president of the Track Specialties Company, died on May 3 at Knickerbocker hospital, New York, following a long illness. Mr. Lee was 76 years of age and had been president of the company for 27 years before his retirement.

Fred S. Denison, engineering executive of the Minneapolis-Honeywell Regulator Company, died on April 18 at Minneapolis, Minn. He was 56 years of age. Born in Green Leaf, Kan., Mr. Denison joined the Minneapolis-Honeywell organization in 1908 and soon became the first member of the engineering department of the company. He left his position as chief engineer to act in a consulting engineering capacity for the sales and engineering departments, and was recently engaged in the active superintendence of the Lake Street ordnance plant. In 1940, Mr. Denison was the winner of the National Association of Manufacturers' Pioneer award, given in recognition of his contributions to industry, science and invention.

Herbert G. Cook, railway supply representative, who died on April 18 as reported in the *Railway Age* of May 1, was born on February 23, 1885 and entered railway service in 1900 with the Chicago, Rock Island & Pacific at Phillipsburg, Kan. In 1902, he was promoted to assistant chief clerk to the storekeeper at Horton, Kan., and in 1905, to chief clerk. He was appointed traveling storekeeper of the Southern Pacific in 1906 and in 1909 was promoted to district storekeeper of the Los Angeles general stores. In 1911, he was appointed district storekeeper of the Sacramento general stores, and in September, 1913, was promoted to general storekeeper. He resigned from this position in June, 1918, to enter the employ of the Bethlehem Shipbuilding Corporation as general storekeeper and in 1920 entered the railway supply business and became a representative of several companies including the Standard Railway Equipment Company, the Dearborn Chemical Company and the Nathan Manufacturing Company.

Financial

ALABAMA, TENNESSEE & NORTHERN.—*Creditors Accept Reorganization Plan.*—The plan of reorganization of this road approved by the Interstate Commerce Commission and the district court has been accepted by all classes of creditors to whom it was submitted, according to a certificate of Division 4 of the commission. Acceptance was unanimous except for rejection by 0.06 per cent of the public holders of prior lien bonds.

BALTIMORE & OHIO.—*Equipment Trusts.*—This road is asking for bids on a proposed issue of $3,500,000 of equipment trust certificates, Series M, due in twenty equal semi-annual installments of $175,000 each on November 1, 1943, and on each May 1 and November 1 thereafter, including May 1, 1953, with dividends at the rate of 3 per cent annually. The issue will be dated May 1, 1943, and is part of a proposed issue of $10,760,000 to be sold in connection with equipment purchases. Bids must be received on or before noon on May 14.

BELT RAILWAY OF CHICAGO.—*Annual Report.*—The 1942 annual statement of this road shows a net income, after interest and other charges, of $576,054, as compared with a net income of $502,571 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
RAILWAY OPERATING REVENUES	$7,496,181	+$892,231
Maintenance of way and structures	488,851	+30,441
Maintenance of equipment	537,343	+31,977
Transportation—Rail Line	3,056,067	+317,024
TOTAL OPERATING EXPENSES	4,268,445	+394,574
Operating ratio	56.94	−1.72
NET REVENUE FROM OPERATIONS	3,227,737	+497,657
Railway tax accruals	1,533,981	+593,647
RAILWAY OPERATING INCOME	1,693,755	−95,990
Net rents—Cr.	438,396	+179,640
NET RAILWAY OPERATING ICOME	2,132,151	+83,650
Total other income	69,414	+1,884
TOTAL INCOME	2,201,564	+85,534
Rent for leased roads and equipment	1,622,553	+10,541
TOTAL FIXED CHARGES	1,623,343	+10,731
NET INCOME	576,054	+73,483
Disposition of net income:		
Balance of income transferred to profit and loss	$576,054	+$73,483

COWLITZ, CHEHALIS & CASCADE.—*Promissory Notes.*—This company has applied to the Interstate Commerce Commission for authority to issue $75,000 of 6 per cent demand promissory notes to cover advances by roads holding its stock, the Great Northern, Northern Pacific, Oregon-Washington Railroad & Navigation, and Chicago, Milwaukee, St. Paul & Pacific, for track repairs, including tie replacements following flood damage.

CENTRAL OF GEORGIA.—*Annual Report.*—The 1942 annual report of this road shows a net income of $3,983,779, as compared with a net income of $1,393,987 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
Average Mileage Operated	1,815.65	−40.05
RAILWAY OPERATING REVENUES	$29,503,084	+$7,166,346
Maintenance of way and structures	2,837,901	+470,763
Maintenance of equipment	4,335,973	+605,736
Transportation—Rail Line	9,819,845	+1,592,316
TOTAL OPERATING EXPENSES	18,969,814	+2,942,571
Operating ratio	64.30	−7.45
NET REVENUE FROM OPERATIONS	10,533,271	+4,223,775
Railway tax accruals	2,508,296	+880,187
RAILWAY OPERATING INCOME	8,024,974	+3,343,588
Equipment rents—Net Dr.	188,983	+10,976
Joint facility rents—Net Dr.	124,012	+5,693
NET RAILWAY OPERATING INCOME	7,711,979	+3,326,919
Non-operating income	744,868	+101,266
GROSS INCOME	8,456,847	+3,428,185
Rent for leased roads and equipment	1,091,167	+800,769
Interest on funded debt	2,928,868	+13,791
TOTAL DEDUCTIONS FROM GROSS INCOME	4,473,069	+838,393
INCOME BALANCE TRANSFERRED TO PROFIT AND LOSS	$3,983,779	+$2,589,792

DENVER & RIO GRANDE WESTERN.—Seeks *Further Hearing on Reorganization.*—This company has petitioned the Interstate Commerce Commission for a further hearing on its reorganization under Section 77 of the Bankruptcy Act in order to introduce evidence "as to the volume and character of its traffic, its revenues, its income, its operating efficiency and the consequent demonstration of earning power developed since the last hearing," which, it states, is in no way connected with the war. Such evidence, the petition asserts, justifies a redetermination of the value of its properties for purposes of reorganization.

ERIE.—*Transfer of Property by Northern of New Jersey.*—The New Jersey Board of Public Utility Commissioners has approved the application of the trustees of the Northern Railroad of New Jersey for the transfer of all property of the latter road to the Erie, in accordance with the terms of the Northern's plan of reorganization. The transfer includes the issued and outstanding capital stock of the Nyack & Southern, a wholly-owned subsidiary of the Northern, and the line of railroad, together with station grounds, rails and other property, extending 26.05 miles from Croxton Junction in Jersey City, N. J., to Nyack, N. Y.

FLORIDA EAST COAST.—*Annual Report.*—The 1942 annual report of this road shows a net income, after interest and other charges, of $5,083,012, as compared with a net deficit of $1,290,614 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
Average Mileage Operated	685	.....
RAILWAY OPERATING REVENUES	$20,838,086	+$9,338,965
Maintenance of way and structures	2,084,304	+517,034
Maintenance of equipment	2,377,874	+329,786
Transportation—Rail Line	5,605,371	+1,704,107
TOTAL OPERATING EXPENSES	11,481,207	+2,828,194
Operating ratio	55.1	−20.1
NET REVENUE FROM OPERATIONS	9,356,879	+6,510,771
Railway tax accruals	985,376	+266,279
RAILWAY OPERATING INCOME	8,371,503	+6,244,492
Equipment rents—Net Dr.	450,804	−104,112
Joint facility rents—Net Dr.	46,740	−55,171
NET RAILWAY OPERATING INCOME	7,873,959	+6,293,433
Other income	126,290	+54,719
GROSS INCOME	8,000,250	+6,348,152
Interest on funded debt	2,830,980	+7,700
NET INCOME CARRIED TO SURPLUS	$5,083,012	+$6,373,627

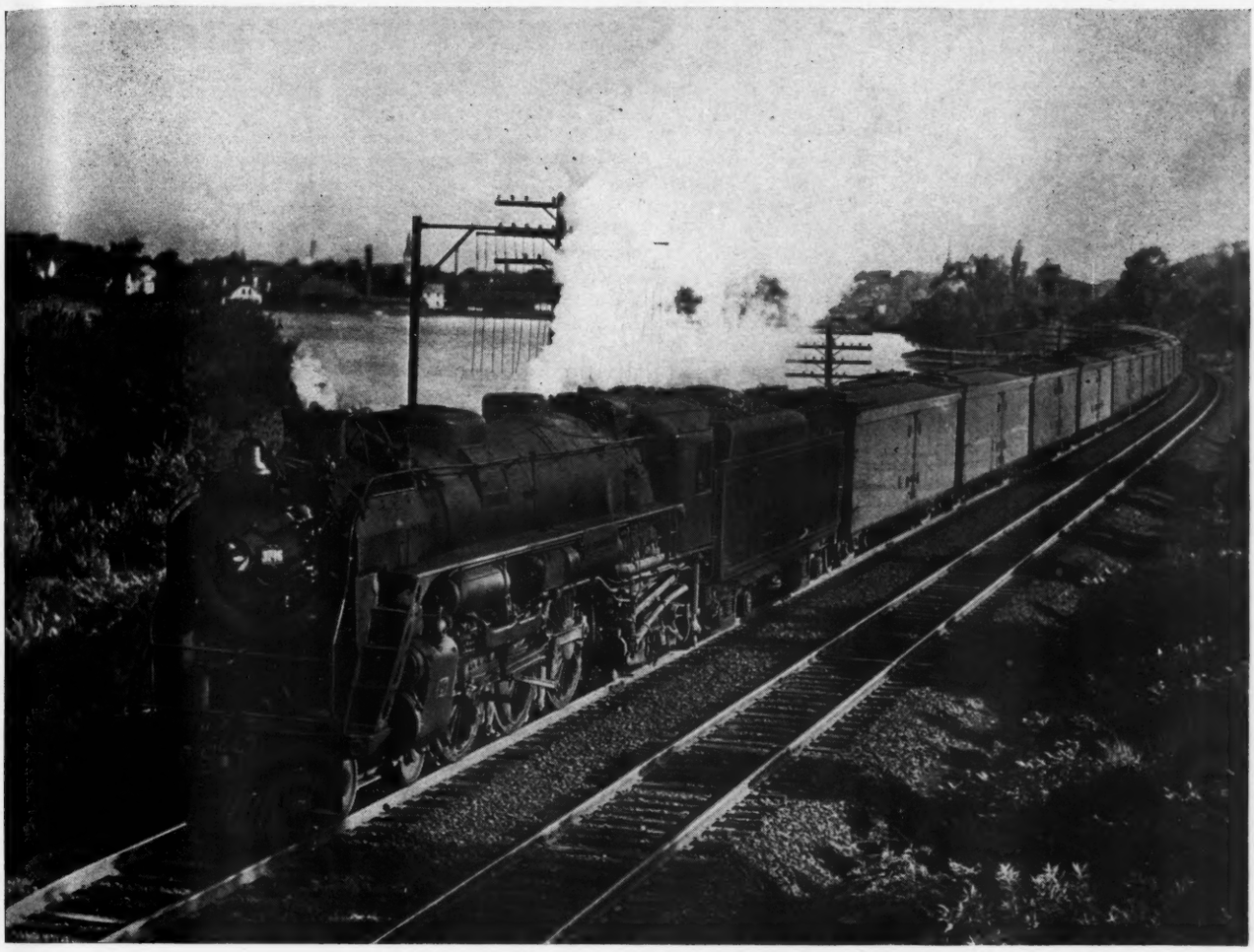
GREAT NORTHERN.—*Bonds.*—This road will, on July 1, redeem at 103 and interest, $18,000,000 of general mortgage 4 per cent convertible bonds, Series G, due in 1946. The operation will be financed from the company's available cash.

KANSAS CITY, ST. LOUIS & CHICAGO.—*Bankruptcy.*—This railroad has filed a voluntary bankruptcy petition in the District court at Chicago asking for permission to reorganize under Section 77. The line has been operated under permanent lease by the Alton, between Mexico, Mo., and Kansas City, as part of its main line. The petition contended that the railroad was without funds to pay its obligations, including an income tax liability of $596,431 from 1933 to March 31, 1943; attorneys' fees of $20,000; court costs of $1,217 and claims for salaries and other office expenses totaling $13,944.

KANSAS CITY SOUTHERN.—*Merger of Subsidiaries.*—This company has applied to the Interstate Commerce Commission for authority to acquire the properties of the Kansas City & Grandview and Texarkana & Fort Smith, both controlled through ownership of all their capital stock except directors' qualifying shares, and to assume the indebtedness of these companies in order that they may be liquidated to simplify its capital structure.

KANSAS CITY SOUTHERN.—*Promissory Notes.*—This company has applied to the Interstate Commerce Commission for authority to issue $1,122,741 of promissory notes, to mature in monthly installments, in evidence of, but not in payment for, the unpaid balance on certain conditional sales contracts for equipment. The issue

News Department continued on next left-hand page



MODERN POWER IS PROVING ITSELF

Today everything that can haul a car has been pressed into service to keep war-time traffic on the move.

But the contrast in performance between the newer locomotives and the old-timers has convinced railroad men of the desirability of ordering modern power when it can be obtained. Economic post-war transportation will demand up-to-date locomotives.

LIMA LOCOMOTIVE WORKS — LIMA LOCOMOTIVE WORKS INCORPORATED — INCORPORATED, LIMA, OHIO

is intended to meet federal tax law requirements.

MINNEAPOLIS & ST. LOUIS.—*Annual Report.*—The 1942 annual report of this road shows a net income, after interest and other charges, of $2,799,289, as compared with a net income of $1,300,463 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
Average Mileage Operated	1,409.41	.....
RAILWAY OPERATING REVENUES	$13,552,988	+$2,716,755
Maintenance of way and structures	1,973,467	+170,487
Maintenance of equipment	1,895,643	+198,295
Transportation	4,159,806	+545,594
TOTAL OPERATING EXPENSES	9,306,263	+1,024,179
Operating ratio	68.67	-7.76
NET REVENUE FROM OPERATIONS	4,246,725	+1,692,576
Railway tax accruals	712,330	+78,598
RAILWAY OPERATING INCOME	3,534,395	+1,613,978
Hire of equipment—Net Dr.	391,554	-31,241
Joint facility rents—Net Dr.	13,188	-15,146
NET RAILWAY OPERATING INCOME	3,129,653	+1,660,365
Non-operating income	56,081	-5,684
GROSS INCOME	3,185,734	+1,654,681
Rent for leased roads and equipment	22,112	+97
TOTAL DEDUCTIONS FROM GROSS INCOME	386,445	+155,855
NET INCOME	$2,799,289	+$1,498,826

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—*Creditors Accept Reorganization Plan.*—The plan of reorganization of this road approved by the Interstate Commerce Commission and the district court has been accepted by all classes of creditors to whom it was submitted, according to a certificate of Division 4 of the commission. In addition to acceptance by the Canadian Pacific as guarantor of interest on the first consolidated mortgage and second mortgage bonds, approval was indicated by 99.33 per cent of the holders of the first consolidated mortgage bonds, by 97.69 per cent of the holders of the second mortgage bonds, and by 98.99 per cent of the holders of the first refunding mortgage bonds. The pledgee of first refunding mortgage bonds securing each of two classes of notes also accepted the plan.

NEW YORK CENTRAL.—*Bonds.*—This road is calling for the redemption of $20,500,000 of 3¾ per cent bonds, due in 1946. The bonds are callable on 60 days' notice at 101 and as a result of this debt reduction, the company will have no important obligation due until 1952.

NEW YORK CENTRAL.—*Equipment Trust.*—This company has applied to the Interstate Commerce Commission for authority to assume liability for $5,300,000 of equipment trust certificates to mature in equal annual installments over a 10-year period, the interest rate and cost to the company to be determined by competitive bidding. The proceeds are to be applied to the purchase of equipment to cost about $7,175,000, consisting of 25 Mohawk type freight locomotives to be built by the Lima Locomotive Works and 200 70-ton flat cars and 700 70-ton high side gondolas to be built in the road's Despatch Shops at East Rochester, N. Y.

Authority for the issue is sought, the application indicated, because it is to the road's advantage to obtain money for this purpose at a low cost while retiring outstanding higher cost securities. In 1942, the application pointed out, this company reduced its indebtedness by $51,318,857, and in the period of 10 years ending with 1942 reduced its annual interest charges by $11,356,106.

Equipment Trusts.—This road will open bids on May 11 on $5,300,000 of equipment trust certificates due in from one to ten years, to be sold to cover 75 per cent of the total cost of 900 freight cars and 25 locomotives.

NEW YORK, SUSQUEHANNA & WESTERN.—*New Trustee.*—Division 4 of the Interstate Commerce Commission has ratified the appointment of Henry K. Norton as trustee of this road.

PERE MARQUETTE.—*New Director.*—At a meeting of the stockholders of this company on May 4 at Detroit, Mich., former Senator Robert J. Bulkley of Cleveland, Ohio, was elected to the board of directors of the company. Thirteen other directors were re-elected.

RICHMOND, FREDERICKSBURG & POTOMAC.—*Annual Report.*—The 1942 annual report of this road shows a net income, after interest and other charges, of $4,015,053, an increase of $1,478,692 as compared with 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
RAILWAY OPERATING REVENUES	$28,117,740	+$14,077,838
Maintenance of way and structures	1,566,137	+350,236
Maintenance of equipment	2,426,320	+388,120
Transportation	6,761,339	+2,353,692
TOTAL OPERATING EXPENSES	11,782,294	+3,362,696
Operating ratio	41.90	-18.07
NET REVENUE FROM OPERATIONS	16,335,447	+10,715,142
Railway tax accruals	10,773,785	+8,582,877
Equipment rents—Net Dr.	1,532,574	+785,195
Joint facility rents—Net Dr.	20,184	-43,809
NET RAILWAY OPERATING INCOME	4,008,903	+1,390,879
Non-operating income	259,305	+9,516
GROSS INCOME	4,268,208	+1,400,395
Interest on funded debt	240,775	-76,725
TOTAL DEDUCTIONS FROM GROSS INCOME	253,155	-78,297
NET INCOME	$4,015,053	+$1,478,692

SEABOARD AIR LINE-GAINESVILLE MIDLAND.—*Acquisition.*—Division 4 of the Interstate Commerce Commission has authorized these roads to acquire jointly the 1.41 miles of yard and switching tracks of the Athens Terminal at Athens, Ga., which they control through ownership of all outstanding stock, and to assume liability for interest payments on $200,000 of Athens Terminal first mortgage bonds in the proportion which the tonnage of freight handled through the terminal for each road bears to the total. At the same time the Athens Terminal was authorized to extend the date of maturity of its first mortgage bonds under an agreement with the bondholders, such bonds to bear 3 per cent interest from January 1, 1943, until the termination of the agreement.

SOUTHERN.—*Note of Georgia Southern & Florida.*—Division 4 of the Interstate Commerce Commission has granted the Georgia Southern & Florida leave to withdraw its application for authority to issue an unsecured promissory note for $1,000,000.

WABASH.—*Annual Report.*—The 1942 annual report of this road shows a net income, after interest and other charges, of $6,500,072, as compared with a net income of $5,532,113 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
Average Mileage Operated	2,395.06	-14.33
RAILWAY OPERATING REVENUES	$78,898,484	+$21,364,944
Maintenance of way and structures	8,221,286	+1,331,405
Maintenance of equipment	9,401,440	+1,029,493
Transportation—Rail Line	25,005,541	+4,734,835
TOTAL OPERATING EXPENSES	47,037,382	+7,700,077
NET REVENUE FROM OPERATIONS	31,861,102	+13,664,867
Railway tax accruals	14,961,300	+9,850,437
RAILWAY OPERATING INCOME	16,899,802	+3,814,430
Joint facility rents—Bal. Dr.	2,058,550	+309,757
NET RAILWAY OPERATING INCOME	11,051,645	+1,936,997
Total other income	746,432	+72,429
TOTAL INCOME	11,798,077	+2,009,425
Rent for leased roads and equipment	366,500	+2,462
Interest on funded debt—Fixed Interest	2,138,328	-1,645,168
TOTAL FIXED CHARGES	2,573,881	-1,603,907
NET INCOME	6,500,072	+967,960
Disposition of net income:		
Income applied to sinking and other reserve funds	196,101	.....
Dividend Appropriations of Income	1,399,633	.....
Total Appropriations	1,595,734	.....
Transferred to credit of profit and loss	$4,904,338	-$627,775

Average Prices Stocks and Bonds

	May 4	Last week	Last year
Average price of 20 representative railway stocks..	37.86	36.64	24.85
Average price of 20 representative railway bonds ..	78.55	77.16	66.55

Dividends Declared

Cleveland & Pittsburgh.—Regular Stock, 87½c, quarterly; Special Guaranteed, 50c, quarterly, both payable June 1 to holders of record May 10.

Nashville, Chattanooga & St. Louis.—$1.00, payable June 1 to holders of record May 12.

News Department continued on next left-hand page

Booster Power keeps *war goods* moving

When extra cars are added the Booster-equipped locomotive gets the train started.

When a combination of bad rail and grade is slowly stalling a heavy train, the added power of the Booster* comes to the rescue.

Engineers of Booster-equipped locomotives bear witness to hundreds of instances like these, where the extra power of the Locomotive Booster has kept traffic moving.

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Construction

RICHMOND, FREDERICKSBURG & POTOMAC.—This road has awarded a contract to Haley, Chisholm & Morris, Charlottesville, Va., for grading and the construction of culvert extensions at Richmond, Va., at an estimated cost of $30,000.

WAR DEPARTMENT.—The U. S. Engineer office, San Francisco, Cal., has awarded a contract, amounting to more than $100,000 and less than $500,000, to Fritz Ziebarth, Long Beach, Cal., for the construction of a railroad yard in California. The U. S. Engineer office, Atlanta, Ga., has awarded a contract, amounting to less than $50,000, to the Nashville, Chattanooga & St. Louis for the relocation of railway facilities in Georgia.

Abandonments

CHESAPEAKE & OHIO.—This company has applied to the Interstate Commerce Commission for authority to abandon its line from Fork Junction, W. Va., to a point near Alkol, 1.99 miles.

CHICAGO, ATTICA & SOUTHERN.—This road has filed with the Interstate Commerce Commission an amended application for authority to abandon certain segments of its line, aggregating 79.9 miles, in place of its previous application for authority to abandon its entire line of about 139 miles. As revised, authority is sought to abandon these portions of line: (1) State Line Junction, Ind., to Morocco, 9.7 miles; (2) Percy Junction, Ind., to LaCrosse, 46.3 miles; and (3) Veedersburg, Ind., to West Melcher, 23.9 miles; and operation under trackage rights over the Pere Marquette from LaCrosse, Ind., to Wellsboro, 15 mi.

CHICAGO & NORTH WESTERN.—This road has applied to the Interstate Commerce Commission for authority to abandon a segment of a branch from Felch, Mich., to the end of the line, 1.35 miles.

LOUISIANA & ARKANSAS.—Division 4 of the Interstate Commerce Commission has authorized this company to abandon its 12.1-mile branch from Paloma, La., to Maryland, a point within the switching limits of Baton Rouge, the line to be acquired by South Shore, an intrastate carrier.

PENNSYLVANIA.—Division 4 of the Interstate Commerce Commission has authorized this company and the Western New York & Pennsylvania, lessor, to abandon operation of and to abandon, respectively, part of a branch line from Crosby, Pa., to Clermont, 8.3 miles, which was damaged by flood in July, 1942.

UNION PACIFIC.—The Yakima Valley, controlled through stock ownership by this company's subsidiary, the Oregon Short Line, has been authorized by Division 4 of the Interstate Commerce Commission to abandon its electrified line from Selah, Wash., to Speyers, 4.2 miles.

Railway Officers

EXECUTIVE

Leonard B. Allen, whose promotion to assistant vice-president—assistant to the president of the Chesapeake & Ohio, with headquarters at Cleveland, Ohio, was reported in the *Railway Age* of May 1, was born at Lexington, Ky., on April 19, 1879, and was graduated in civil engineering from Kentucky State University in 1899. He entered railway service in that year as a rodman on the Southern, and in August, 1899, he went with the C. & O., as a levelman on the location of the Big Sandy division. He served on location and construction work until January 1, 1905, when he was promoted to assistant in the office of the engineer maintenance of way at Richmond, Va., and a year later he was advanced to division engineer of the Kentucky division, with headquarters at

Greystone Studios, Inc.

Leonard B. Allen

Ashland, Ky. Mr. Allen was promoted to engineer maintenance of way of the Kentucky general division, with headquarters at Covington, Ky., on May 1, 1910, and on January 1, 1914, he was further advanced to assistant chief engineer, with headquarters at Richmond. One month later he was appointed superintendent of the Huntington and Big Sandy divisions, with headquarters at Huntington, W. Va., and on July 1, 1916, he was promoted to general superintendent of the Western general division, with the same headquarters. On January 29, 1918, Mr. Allen was advanced to superintendent of maintenance of way for the entire system, with headquarters as before at Huntington, and in October, 1926, he was promoted to assistant to the vice-president, with headquarters at Richmond. Early in 1933, Mr. Allen was appointed assistant to the executive vice-president of the C. & O., and the Nickel Plate, and later of the Pere Marquette, with headquarters at Cleveland, and in May, 1940, he was promoted to assistant to the president of the three roads, the position he held until his new appointment, effective April 28.

John B. Parrish, whose appointment as vice-president of the Chesapeake & Ohio, with headquarters at Richmond, Va., was announced in the *Railway Age* of May 1, was born on September 8, 1877, in New Kent county, Va., and was graduated from

John B. Parrish

the College of William and Mary in 1898. He entered railroad service on July 1, 1901, as a clerk in the office of the agent of the Chesapeake & Ohio at Newport News, Va. He then served consecutively until December 31, 1918, as clerk in the superintendent's office; clerk in the general manager's office; on the car allotment commission; assistant to the general superintendent; assistant superintendent of transportation; superintendent of transportation, and general superintendent. On January 1, 1919, he was appointed general manager of the Chesapeake & Ohio, and in 1926 Mr. Parrish became assistant vice-president, the position he held at the time of his recent appointment.

P. J. Neff, assistant chief traffic officer—passenger, of the Missouri Pacific, and vice-president and general manager of the Missouri Pacific Transportation Company, (motor transport subsidiary)), at St. Louis, Mo., has been promoted to senior executive assistant in charge of the Gulf Coast Lines and the International-Great Northern (Texas lines of the Missouri Pacific), and executive assistant of the Missouri Pacific, with headquarters at Houston, Tex. He succeeds **H. R. Safford,** whose death on April 10 was reported in the *Railway Age* of April 17.

William D. Wiggins, vice-president—engineering of the Pennsylvania at Philadelphia, Pa., has retired after 48 years of railroad service. Mr. Wiggins became vice-president on February 1 of this year, and his photograph and a biographical sketch of his railway career were published in the *Railway Age* of February 13, page 382.

Frederick L. Rowland, whose appointment as assistant to trustees of the New York, New Haven & Hartford, with headquarters at New Haven, Conn., was an-

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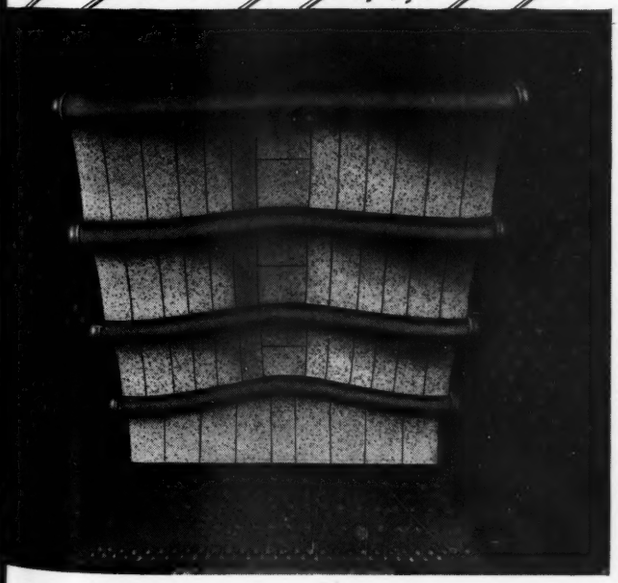
Here's help in maintaining *Fuel Burning Efficiency*



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Locomotive Combustion Specialists

nounced in the *Railway Age* of May 1, was born on January 23, 1883, at Guilford, Conn., and attended Yale Business college at New Haven. Mr. Rowland entered railroad service on January 23, 1905, as a stenographer in the office of the vice-president of the New York, New Haven &

Frederick L. Rowland

Hartford at New Haven, later serving in that capacity at Boston and New Haven. He subsequently served as secretary to various presidents of the New Haven. Mr. Rowland was employed as secretary to trustees of the road at the time of his recent appointment.

Donald H. Smith, whose election as vice-president in charge of traffic of the General American Transportation Corporation, with headquarters at Chicago, was reported in the *Railway Age* of April 24, was born at Atlanta, Ga., on March 8, 1895, and entered railway service in 1912 as a file clerk of the Nashville, Chattanooga & St. Louis at Atlanta, later serving as a solicitation clerk. After leaving railway service for a short period to work for a

Donald H. Smith

telephone company, he went with the Seaboard Air Line (now the Seaboard) in 1914 as a tracing clerk. In 1916 he became car accountant of the International Agricultural Corporation at Atlanta and in February, 1918, he was placed in charge of the tank car fleet of the Ordnance department at Washington, D. C. In January, 1919, Mr. Smith went with the General American Transportation Corporation as traffic manager of the East Chicago, Ind., Plant and in 1927 he was promoted to assistant traffic manager of the company. He was advanced to traffic manager in 1929 and his title was changed to general traffic manager in 1934, which position he held until his recent promotion.

FINANCIAL, LEGAL AND ACCOUNTING

John E. Hennessy has been appointed attorney of the Western Pacific, Sacramento Northern and the Tidewater Southern, with headquarters at San Francisco, Cal., succeeding **L. N. Bradshaw,** who has resigned.

Carroll Lee Cole, whose appointment as auditor of freight traffic of the Baltimore & Ohio, with headquarters at Baltimore, Md., was announced in the *Railway Age* of April 24, was born on August 31, 1881, in Baltimore county, Md. Entering railroad service as clerk to the auditor of

Carroll Lee Cole

revenue of the Baltimore & Ohio on April 10, 1900, Mr. Cole became chief clerk in the office of the auditor of revenue and accounts on September 1, 1918, and on March 1, 1920, he was transferred to the office of the assistant comptroller. On October 1, 1923, he was appointed station accountant, and on July 1, 1939, became assistant auditor of freight traffic, the position he held at the time of his recent promotion to auditor of freight traffic.

Arthur E. Clark, whose retirement as secretary of the New York, New Haven & Hartford and affiliated companies was announced in the *Railway Age* of May 1, was born on August 13, 1871, at Milford, Conn. He entered railroad service as stenographer and clerk for the New York, New Haven & Hartford in 1890. In 1904 he became chief clerk in the secretary's office and in 1909 he was appointed assistant secretary. Mr. Clark became secretary of the road in 1910, serving in that position until the time of his retirement. He is also a director of the New Haven and several of its subsidiary companies and will continue to serve in that capacity.

OPERATING

Cornelius Walter Russell, whose appointment as general superintendent of the Winston-Salem Southbound, with headquarters at Winston-Salem, N. C., was announced in the *Railway Age* of April 10,

Cornelius W. Russell

was born on March 28, 1891, at Portsmouth, Ohio. Mr. Russell attended St. John's college, Portsmouth, and entered railroad service on January 9, 1910, as a clerk of the Norfolk & Western. He became chief clerk to the assistant superintendent at Portsmouth, in January, 1918, and in September, 1921, was transferred to the office of the superintendent, also at Portsmouth. Mr. Russell became assistant trainmaster of the Scioto division of the Norfolk & Western in November, 1936, and maintained that position until the time of his recent appointment as general superintendent of the Winston-Salem Southbound.

Charles Edward McCarty, general superintendent of the Kansas City Southern and the Louisiana & Arkansas, has been appointed manager of the Potomac yard, with jurisdiction over the transportation, maintenance of way, and maintenance of equipment departments of Potomac yard. His headquarters will be at Alexandria, Va. Mr. McCarty was born on June 17, 1886, at Fort Scott, Kan., and entered railway service in July, 1903, as timekeeper of the Kansas City Southern.

Charles E. McCarty

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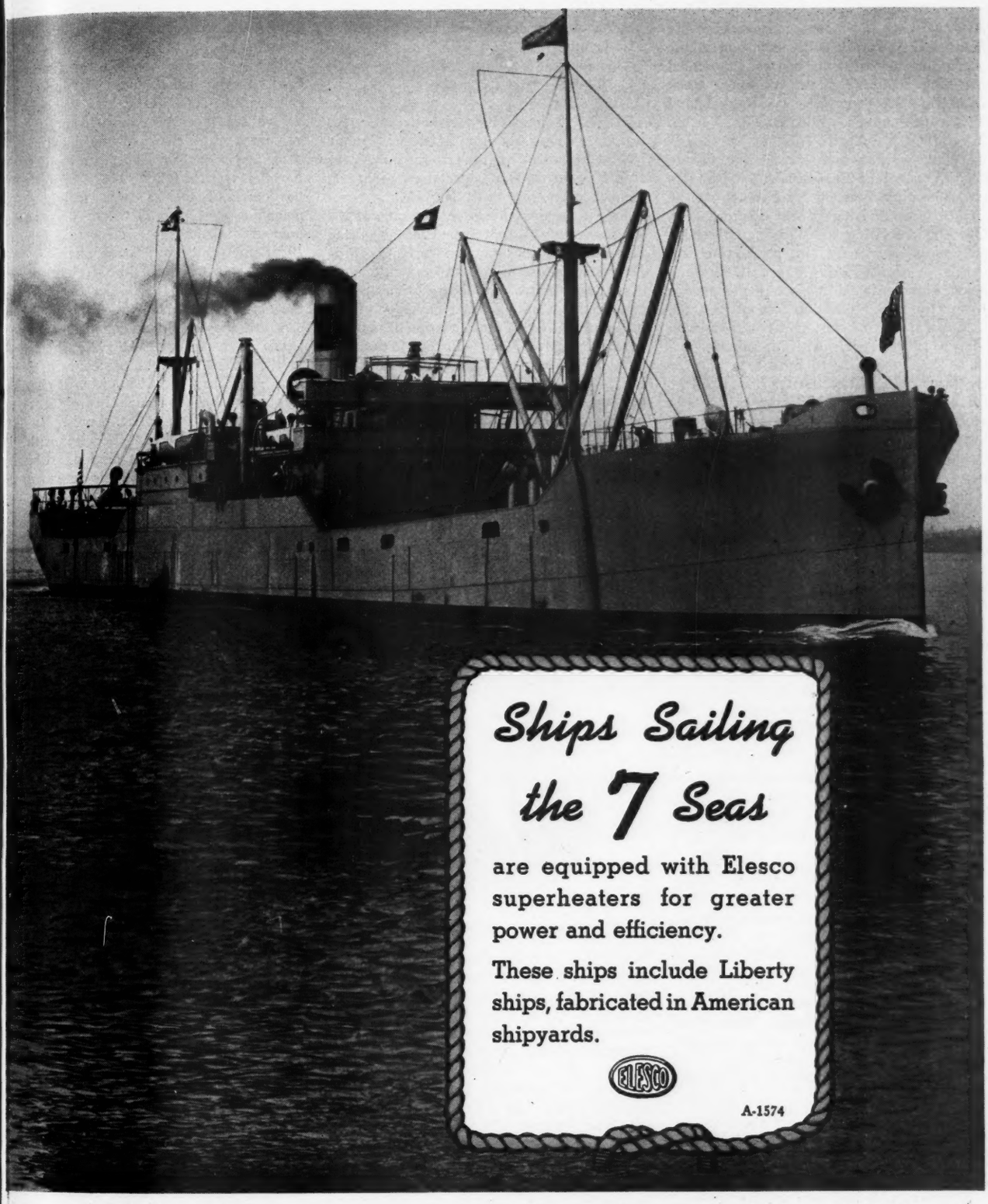
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After serving in various capacities on the Kansas City Terminal division, and in the accounting department, he was appointed traveling auditor of the Chicago, Rock Island & Gulf (now Chicago, Rock Island & Pacific) at Ft. Worth, Tex. From May, 1909, to April, 1912, he served as traveling auditor and chief clerk to the superintendent of the Kansas City Southern, becoming assistant trainmaster on the Cumberland division of the Baltimore & Ohio on the latter date, leaving this company in 1917 to enlist in the Engineering Corps of the United States Army, and being commissioned a first lieutenant in France in 1918. While in France he acted as general yardmaster at Gievres, and in March, 1919, he went with his railway outfit to North Russia to operate a part of the Murman Railway. After his discharge from the army, Mr. McCarty engaged in other business for several years, returning to the Kansas City Southern in November, 1925, as inspector of transportation. In June, 1935, he was promoted to superintendent of the Kansas City Terminal division, and on June 1, 1937, he was appointed also superintendent of the Northern division, with headquarters at Pittsburg, Kan. He became general superintendent of transportation of the Kansas City Southern at Kansas City, Mo., in June, 1940. At the time of his recent appointment as manager of the Potomac yard, Mr. McCarty was located at Shreveport, La.

O. F. Guerin has been appointed superintendent of the Yreka Western, with headquarters at Yreka, Cal.

W. W. Preisch, superintendent of the Buffalo division of the Lehigh Valley, with headquarters at Buffalo, N. Y., has been granted a leave of absence to serve as a lieutenant colonel in the U. S. Army.

F. J. Tsudeau has been appointed supervisor of schedules of the New York Central, with headquarters at Syracuse, N. Y., and **J. V. Cundare** has been appointed trainmaster of the St. Lawrence division of that road.

F. A. Williams, roadmaster of the Chicago, Rock Island & Pacific, with headquarters at Fairbury, Neb., has been promoted to assistant superintendent of work equipment, with headquarters at Chicago, a newly-created position.

M. O. Parker, assistant trainmaster of the New York Central at Cleves, Ohio, has been promoted to trainmaster of the Indianapolis Terminal, succeeding **Roy Whistman,** who has been appointed trainmaster of the Indianapolis division, with headquarters as before at Indianapolis, Ind., replacing **K. F. Emmanuel,** who has joined the armed forces.

C. W. Dentner, assistant superintendent of the West Hannibal division of the Chicago, Burlington & Quincy, has been promoted to superintendent of the Denver, Colo., terminals of the Burlington and also of the Colorado & Southern, a newly-created position. **R. L. Sims,** assistant superintendent at Wymore, Neb., has been transferred to the Hannibal division, with headquarters at Brookfield, Mo., succeeding Mr. Dentner.

TRAFFIC

H. L. Schaeffer, assistant passenger traffic manager, of the Missouri Pacific has been advanced to general passenger traffic manager, with headquarters at St. Louis, succeeding P. J. Neff, whose promotion to senior executive assistant of the Texas Lines of the Mo. P. is reported elsewhere in these columns. **R. J. McDermott,** assistant general superintendent of transportation, has been promoted to vice-president and general manager of the Missouri Pacific Transportation Company, succeeding Mr. Neff. **T. D. Moss,** assistant general passenger agent at Little Rock, Ark., has been advanced to assistant passenger traffic manager at St. Louis, relieving Mr. Schaeffer, and **J. B. Reynolds,** district passenger agent at Los Angeles, Cal., has been promoted to assistant general passenger agent at Little Rock, replacing Mr. Moss.

James Harold Swaim, whose appointment as traffic manager of the Winston-Salem Southbound, with headquarters at

James Harold Swaim

Winston-Salem, N. C., was announced in the *Railway Age* of April 10, was born on July 21, 1892, at Salem, N. C. Mr. Swaim entered railroad service on January 19, 1914, as a stenographer in tht traffic department of the Winston-Salem Southbound. He became rate clerk in March, 1916, and in September, 1918, was advanced to chief clerk. In August, 1922, he was appointed commercial agent, and in January, 1942, was promoted to general agent, which position he was maintaining at the time of his recent promotion to traffic manager.

Perry W. Wilson, division passenger agent of the St. Louis-San Francisco, has been promoted to assistant general passenger agent, with headquarters at St. Louis, Mo., a newly-created position.

Arthur W. Richardson, whose return to the Wabash as freight traffic manager with headquarters at St. Louis, Mo., after an absence of two years was reported in the *Railway Age* of April 24, was born at Milwaukee, Wis., on March 29, 1898, and entered railway service on October 10, 1919, as a stenographer in the mechanical department of the Wabash at Chicago. After holding the positions of timekeeper in the mechanical department, clerk in the engineering department and stenographer in the transportation department, he was appointed rate clerk in the local freight office at Chicago on December 14, 1922. On November 24, 1924, he was transferred to the office of the assistant freight traffic manager at Chicago, where he was appointed assistant rate clerk on July 16, 1925, chief rate clerk on January 7, 1926, and representative of the freight department on May 1, 1929. On October 1 of the same year, he was appointed chief clerk to the freight traffic manager at St. Louis, and on June 4, 1922, chief clerk in the general freight office at St. Louis. On September 16, 1936, Mr. Richardson was promoted to general freight agent with headquarters at St. Louis. In 1941 he resigned to accept service with the Central Freight Association, Chicago, where he remained until his return to the Wabash in April.

ENGINEERING & SIGNALING

H. N. Huntsman has been appointed chief engineer of the Litchfield & Madison, with headquarters at Edwardsville, Ill., succeeding **R. L. Longshore,** who has retired.

M. B. Clark, district engineer of the Atchison, Topeka & Santa Fe, has been promoted to assistant chief engineer, of the Coast Lines with headquarters as before at Los Angeles, Cal., a newly-created position. **R. E. Chambers,** division engineer at San Bernardino, Cal., has been advanced to district engineer at Los Angeles, succeeding Mr. Clark, and **L. E. Smith,** assistant division engineer at San Bernardino, has been promoted to division engineer, with the same headquarters, replacing Mr. Chambers.

MECHANICAL

L. D. Richards, superintendent of shops of the Chicago, Rock Island & Pacific, has been promoted to assistant general superintendent of motive power, with headquarters as before at Silvis, Ill. **Roy W. Harter,** process supervisor, has been advanced to superintendent of shops, succeeding Mr. Richards.

Reed Haag, supervisor car inspection and maintenance of the Delaware, Lackawanna & Western at Scranton, Pa., has been appointed general car foreman at Buffalo, N. Y., with jurisdiction over the Buffalo division, and **H. A. Ryan,** general car foreman at Buffalo, has been appointed general car inspector, with headquarters at Scranton.

Following the resignation of **D. S. Ellis** as chief mechanical officer of the Chesapeake & Ohio, the Pere Marquette and the New York, Chicago & St. Louis (Nickel Plate), which was reported in the *Railway Age* of April 24, **Clyde B. Hitch, Richard J. Williams** and **Thomas C. Shortt** have been promoted to chief mechanical

officers of the three roads, respectively. Mr. Hitch was born on November 19, 1881, at Terre Haute, Ind. After receiving a high school education he entered railway service as a machinist apprentice on the Vandalia (now part of the Pennsylvania) at Terre Haute, completing his apprenticeship in

Thomas C. Shortt

1900. He later served as machinist on the Pere Marquette, the Louisville & Nashville, the Iron Mountain (now part of Missouri Pacific), the Southern and the Chicago & Eastern Illinois. Mr. Hitch entered the service of the Chesapeake & Ohio in 1902 as a machinist at Lexington, Ky. In 1909 he was appointed general foreman at Lexington, being transferred to the Covington shops at Covington, Ky., in 1910 and to the Hinton (W. Va.) shops in 1913. In 1920, Mr. Hitch became master mechanic at Clifton Forge, Va., being transferred to the Cincinnati and Northern divisions in 1923, and to Russell, Ky., with jurisdiction over the Cincinnati, Northern and Russell divisions in 1930. Later in 1930, he was appointed general master mechanic at Huntington, W. Va., holding that position until 1934 when he became assistant superintendent of motive power at Huntington. In October, 1938, Mr. Hitch

Clyde B. Hitch

was advanced to superintendent of motive power, the position he held at the time of his new appointment.

Mr. Williams was born at Indianapolis, Ind., in 1880, and graduated from Purdue in 1905. He entered railway service in 1899 as a helper in the engineering corps of the Peoria & Eastern (now part of the New York Central system), and in 1905 he joined the mechanical division of Isthmus Canal Commission at Panama. One year later Mr. Williams became a special apprentice of the Cleveland, Cincinnati, Chicago & St. Louis (now part of the New York Central system), subsequently being promoted to shop superintendent. In 1916 he was appointed assistant superintendent of motive power of the Missouri-Kansas-Texas and in 1917 he became superintendent of motive power of the Pere Marquette, holding that position until his new appointment.

Mr. Shortt was born at Crewe, Va., on December 9, 1888, and entered railway service as an apprentice of the Norfolk & Western at Crewe. He served in various capacities on the Atlantic Coast Line, the Norfolk & Southern and the Norfolk & Western until 1914 when he was appointed roundhouse foreman of the Seaboard. One year later Mr. Shortt returned to the N. & W. as assistant foreman at Petersburg, Va., and in 1923 he became a machinist of the Chesapeake & Ohio, subsequently

Richard J. Williams

serving as foreman, chief inspector and supervisor of reclamation. In July, 1933, he was appointed assistant to the superintendent of motive power of the Nickel Plate at Cleveland, Ohio, and was promoted to superintendent of motive power in June, 1942, holding that position until his new appointment.

J. C. Hanssen, assistant master mechanic of the Southern Pacific at Roseville, Cal., has been promoted to master mechanic, with headquarters at Sparks, Nev. He will have jurisdiction over that part of the Salt Lake division west of Carlin, Nev. **J. E. Stone** continues as master mechanic at Ogden, Utah, with jurisdiction from Ogden to and including Carlin.

William A. Birch, division foreman of the Atchison, Topeka & Santa Fe at Barstow, Cal., has been promoted to master mechanic, with headquarters at Chanute, Kan., succeeding **H. L. Price,** who has been transferred to Chicago. **H. V. Gill,** master mechanic at Chicago, has been transferred to Winslow, Ariz., replacing **H. D. Eddy,** who has been transferred to Needles, Cal., succeeding **M. F. Smith,** who goes to Fresno, Cal., replacing **J. A. Conley,** who has retired.

PURCHASES AND STORES

N. C. Johnson, assistant purchasing agent of the Nashville, Chattanooga & St. Louis, has been promoted to purchasing agent, with headquarters as before at Nashville, Tenn., succeeding **J. L. Woods,** who has retired because of ill health.

SPECIAL

James C. Bingham, who at present is employed by The Texas Company at Boston, Mass., has been appointed New Hampshire representative of the Boston & Maine with headquarters at Concord, N. H.

C. R. Kennedy, chief clerk of the employment bureau of the Northern Pacific, has been promoted to superintendent of the employment bureau, with headquarters as before at St. Paul, Minn., succeeding **A. N. Page,** who has retired.

OBITUARY

Charles N. Smith, trainmaster of the Seaboard at Birmingham, Ala., died at that city on April 28, following a heart attack.

John T. Ludlum, who retired in 1938 as freight claim agent of the Minneapolis, St. Paul & Sault Ste. Marie (Soo Line), died on April 26, at Minneapolis, Minn.

George P. Williams, who at one time served as engineer maintenance of way of the Long Island at Jamaica, N. Y., died on May 2, at his home in Garden City, N. Y., at the age of 65.

R. L. Holmes, engineer, water supply, of the Texas & Pacific, with headquarters at Dallas, Tex., died at Sanatorium, Tex., on April 26, following a brief illness. Mr. Holmes was born in 1880, and entered railway service on March 22, 1900, as a rodman of the T. & P., subsequently serving as instrumentman, assistant engineer and division engineer. From August, 1915, to August, 1917, Mr. Holmes served as assistant chief engineer, with headquarters at Dallas, and on the latter date he was appointed to the position he held at the time of his death. Mr. Holmes served for a number of years on the Water Service Committee of the A. R. E. A.

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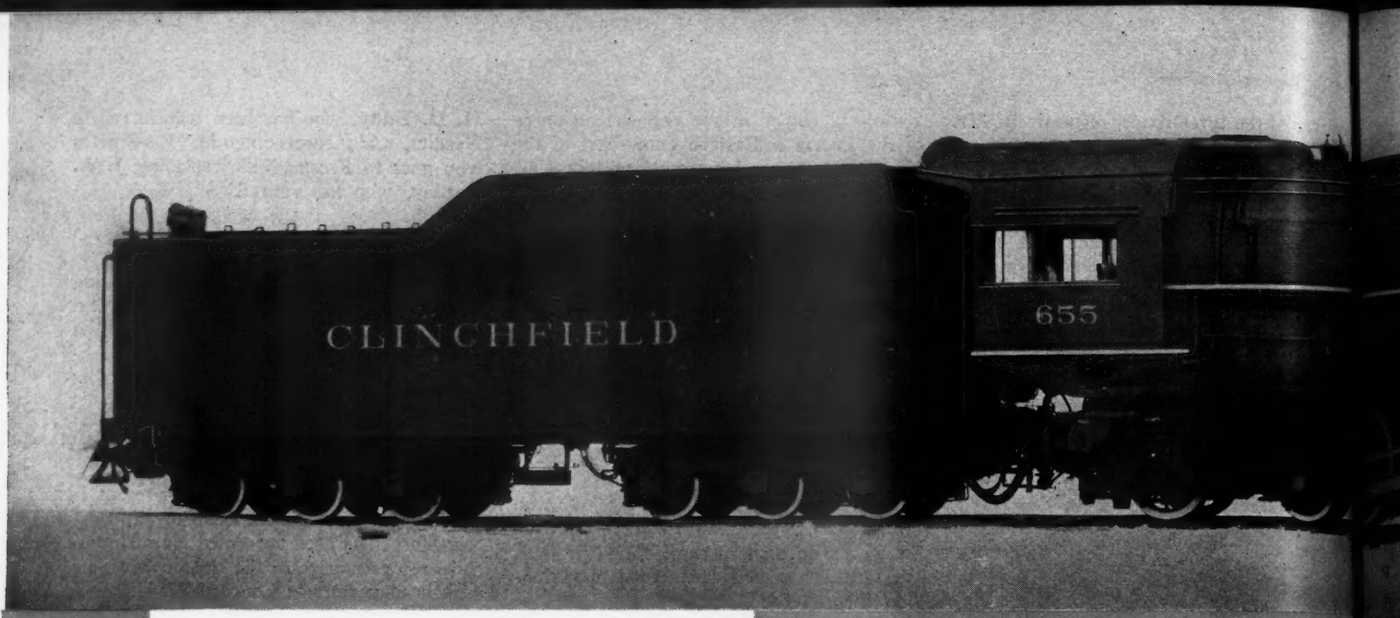
MANNING THE R.R. USO.—A group of business and professional men have taken over the "owl" and early morning shifts at the USO service men's lounge in Pennsylvania station, New York. A group of women volunteer workers, numbering about 260, serve at the lounge during the day and in the early evening hours. The men, about 35 of them, will serve on the "owl" shift from midnight to 4 a.m. and from 4 a.m. to 8 a.m. The lounge is open 24 hours a day, seven days a week and since its opening in March, 1942, has served a total of 508,723 service men. The highest attendance for any single month was attained in March this year, when 75,148 service men took advantage of its facilities.

Table of Revenues and Expenses begins on second left-hand page



★ ★ ★ "DESIGNED
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"Looking ahead into 1943, I can make no other prediction than the same one I made a year ago, namely, that the remarkable transportation achievements of the past year must be excelled, and that the job will be performed with increasing difficulty. Performed it will be, however — because it must."

Joseph B. Eastman
Director, Office of Defense Transportation

The eight Alco 4-6-6-4's, recently delivered to the Clinchfield, means that fast service on this road will be stepped up and expanded.

★

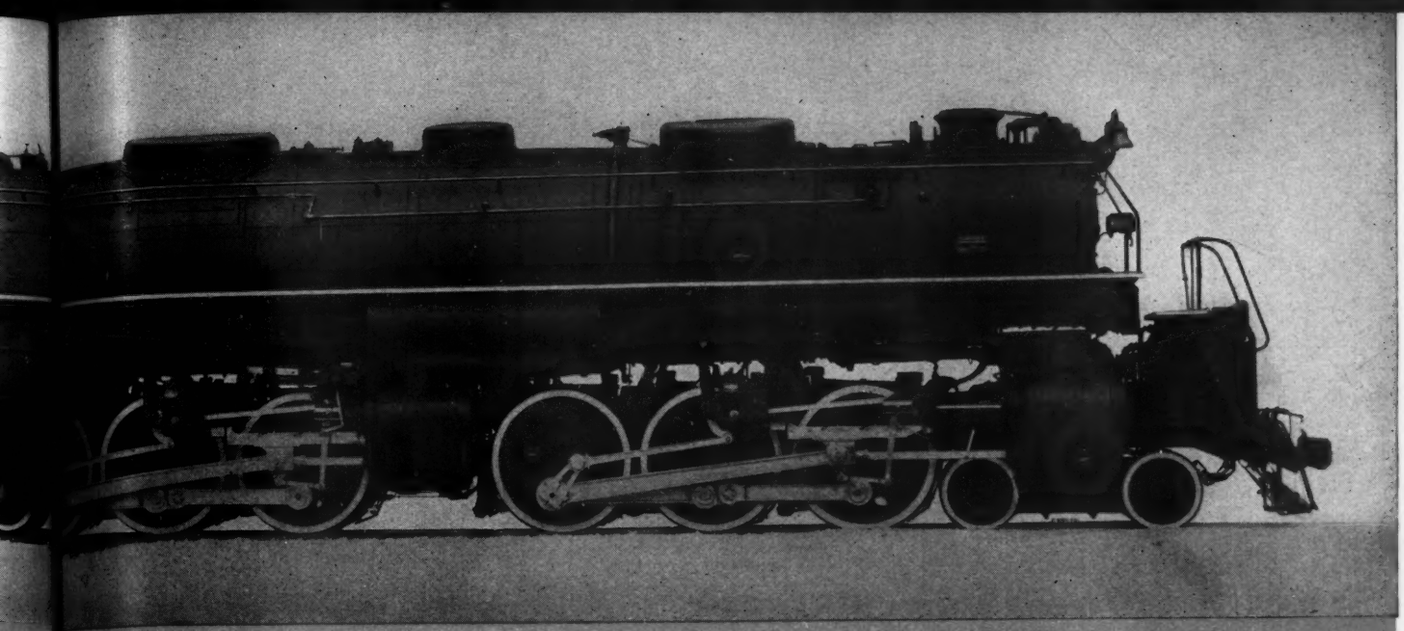
Locomotive Characteristics

Weight on Drivers	420,000 Lb.
Weight of Engine	607,000 Lb.
Cylinders (Four)	22 x 32 Ins.
Diameter of Drivers	69 Ins.
Boiler Pressure	265 Lb.
Tractive Power	101,120 Lb.
Tender Capacity—Fuel	26 Tons
Tender Capacity—Water	22,500 Gals.

AMERICAN LOCOMOTIVE

MANUFACTURERS OF MOBIL POWER

STEAM, DIESEL AND ELECTRIC LOCOMOTIVES, MARINE DIESELS, TANKS, GUN CARRIAGES & OTHER ORDNANCE



D FOR PEACE

a mighty instrument

OF WAR"

★ ★ ★ ★ ★ ★ ★ ★ ★

FOR VICTORY BUY U. S.
WAR BONDS AND STAMPS

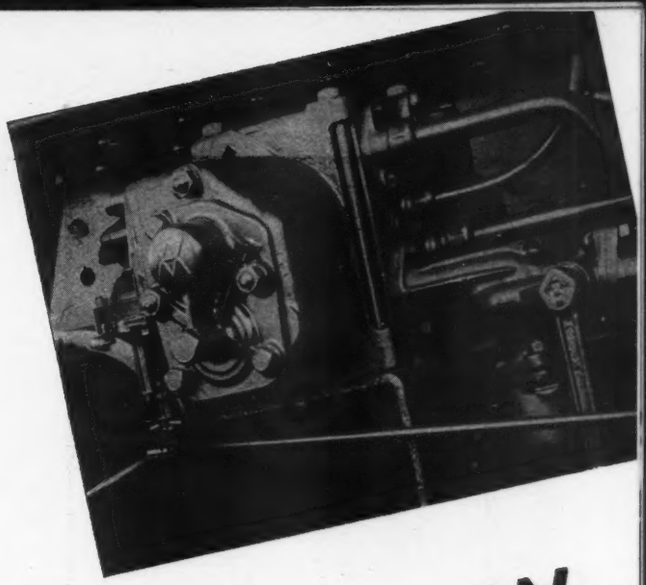
REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1943

Name of Road		Av. mileage operated during period	Operating revenues			Operating expenses					Operating ratio	Net from railway operation	Operating income	Net railway operating income	
			Freight	Passenger	Total (inc. misc.)	Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total				1943	1942
Akron, Canton & Youngstown	March	171	$393,885	$112	$413,447	$45,333	$30,990	$16,805	$107,749	$216,631	52.4	$196,816	$126,976	$112,003	$61,080
	3 mos.	171	1,013,722	322	1,056,530	128,522	91,867	50,709	294,338	607,215	57.5	449,315	289,779	244,691	146,466
Alton	March	959	2,201,957	671,017	3,172,047	293,209	442,012	50,978	921,116	1,831,070	57.7	1,340,977	881,989	610,399	254,055
	3 mos.	959	6,375,514	1,830,667	9,051,138	813,524	1,250,302	143,169	2,661,115	5,202,614	57.5	3,848,524	2,539,131	1,724,754	832,674
Atchison, Topeka & Santa Fe System	March	13,160	27,221,254	7,494,432	37,284,195	3,485,416	5,092,433	515,401	9,693,057	19,300,269	51.8	17,983,926	5,331,473	5,110,788	4,533,199
	3 mos.	13,160	78,405,679	20,758,710	106,439,712	9,559,342	14,719,991	1,494,709	27,286,616	54,594,032	51.3	51,845,680	15,815,800	14,998,035	11,476,042
Atlanta & West Point	March	93	297,777	116,641	462,701	43,297	41,600	9,136	136,026	246,964	53.4	215,737	74,959	45,082	24,855
	3 mos.	93	819,590	323,796	1,266,194	108,731	117,383	28,190	382,861	685,006	54.1	581,188	205,552	124,477	65,763
Western of Alabama	March	133	317,250	119,516	477,726	52,155	49,035	9,895	137,307	263,954	55.3	213,772	74,689	58,254	40,257
	3 mos.	133	842,854	343,805	1,294,915	128,907	136,873	29,599	393,382	733,437	56.6	561 478	202,458	163,600	112,867
Atlanta, Birmingham & Coast	March	639	605,054	65,200	698,505	74,360	66,513	26,077	220,555	406,695	58.2	291,810	137,695	90,199	13,792
	3 mos.	639	1,636,516	178,437	1,894,125	225,690	215,655	77,011	646,473	1,223,279	64.6	670,846	381,596	247,020	20,862
Atlantic Coast Line	March	4,979	10,470,732	3,308,172	14,590,183	973,449	1,621,665	171,839	3,413,967	6,533,527	44.8	8,056,656	3,056,656	2,578,029	2,504,108
	3 mos.	4,987	28,568,189	9,358,031	40,138,809	2,779,932	4,560,397	501,450	9,781,707	18,653,178	46.5	21,485,631	7,485,631	5,979,620	5,130,103
Charleston & Western Carolina	March	343	392,837	13,887	414,429	38,702	47,457	10,225	114,246	215,998	52.1	198,431	128,431	127,938	91,010
	3 mos.	343	1,047,869	34,778	1,102,123	114,396	139,878	30,016	319,265	620,023	56.3	482,100	282,100	284,705	219,997
Baltimore & Ohio	March	6,150	25,583,657	2,828,318	30,027,425	3,412,094	5,640,174	467,408	9,209,041	19,674,787	65.5	10,352,638	6,907,392	6,418,815	5,135,766
	3 mos.	6,150	71,012,456	8,354,924	83,843,348	8,759,603	16,118,697	1,285,506	26,658,112	55,600,223	66.3	28,243,125	17,984,497	16,336,471	10,793,495
Staten Island Rapid Transit	March	24	217,330	101,659	326,532	29,749	34,222	1,209	104,494	186,676	57.2	139,856	89,356	74,958	—5,485
	3 mos.	24	604,860	312,753	939,056	83,157	88,180	3,391	301,976	531,066	56.6	407,990	260,869	222,262	—46,270
Bangor & Aroostook	March	602	1,017,134	76,878	1,123,788	122,755	114,975	6,661	214,554	490,159	43.6	633,629	371,107	359,589	234,939
	3 mos.	602	2,515,164	196,181	2,791,906	360,506	334,869	17,346	620,554	1,422,481	50.9	1 369,425	773,901	772,517	540,345
Bessemer & Lake Erie	March	214	1,051,491	1,994	1,065,498	147,351	809,462	12,581	262,021	1,268,385	119.0	—202,887	—234,500	20,683	236,567
	3 mos.	214	2,895,791	5,750	2,939,797	381,382	2,365,096	37,684	757,642	3,655,189	124.3	—715,392	—857,478	—310,433	—236,402
Boston & Maine	March	1,825	5,662,165	1,425,319	7,746,800	918,764	1,072,200	78,163	2,583,082	4,864.135	62.8	2,882,665	1,710,181	1,393 147	1,248,556
	3 mos.	1,825	14,924,496	4,216,938	20,932,681	2,836,182	3,135,765	227,626	7,428,127	14,266,344	68.2	6,666,337	4,017,615	3,108,636	2,385,043
Burlington, Rock Island	March	228	170,997	58,086	242,279	26,764	23,602	2,504	91,360	158,343	65.4	83,936	72,081	45,321	32,350
	3 mos.	228	474,538	171,524	682,431	75,050	67,470	7,672	248,843	439,187	64.4	243,244	209,074	138,793	28,162
Cambria & Indiana	March	35	190,419	.....	190,487	8,695	73,023	446	21,384	109,869	57.68	80,618	—12,634	67,347	81,047
	3 mos.	35	522,953	.....	523,143	35,727	217,143	1,541	59,208	333,917	63.83	189,226	—91,385	135,222	230,550
Canadian Pacific Lines in Maine	March	234	436,156	31,810	486,743	41,057	63,874	6,171	158,763	277,753	57.1	208,990	188,625	163,853	130,014
	3 mos.	234	1,161,799	124,288	1,345,432	128,325	179,103	18,383	428,363	778,485	57.9	566,947	507,328	417,487	483,620
Canadian Pacific Lines in Vermont	March	90	84,737	5,529	102,765	25,281	21,754	2,242	96,466	149,678	145.7	—46,913	—54.080	—81,632	—52,499
	3 mos.	90	237,010	33,642	311,931	78,310	70,699	6,665	261,844	429,524	137.7	—117,593	—142,968	—221,243	—160,532
Central of Georgia	March	1,815	2,470,286	615,750	3,376,323	326,712	406,991	65,761	991,183	1,915,320	56.7	1,461,003	1,041,927	965,631	496,593
	3 mos.	1,815	6,598,740	1,617,717	8,960,637	928,723	1,173,376	200,793	2,843,019	5,503,511	61.4	3,457,126	2,421,781	2,290,406	938,536
Central of New Jersey	March	657	4,685,780	627,626	5,622,843	596,874	901,018	48,921	2,243,450	3,916.529	69.7	1,706,314	1,020,500	762,143	575,845
	3 mos.	657	12,599,230	1,809,953	15,305,170	1,650,256	2,556,500	147,636	6,474,972	11,222 692	73.3	4,082,478	2,229,465	1,513,439	1,076,453
Central Vermont	March	422	663,828	63,000	776,636	119,296	116,975	9,981	327,478	599,526	77.2	177,110	129,321	78,067	70,179
	3 mos.	422	1,755,726	200,000	2,081,169	296,180	344,365	30 041	873,442	1,614,960	77.6	466,209	337,576	203,934	193,462
Chesapeake & Ohio	March	3,092	16,048,171	1,364,609	17,946,233	1,566,004	2,753,697	235,292	3,996,938	9,042,592	50.4	8,903,641	2,721,518	3,317,266	3.458,390
	3 mos.	3,092	43,178,333	4,296,894	48,875,982	4,536,412	8,179,328	659 638	11,170,726	25,886,278	53.0	22,989 704	7,702,758	9,257,740	7,348,267
Chicago & Eastern Illinois	March	912	1,959,319	506,042	2,696,306	274,866	340,398	59,791	843,669	1,609,093	59.7	1,087,213	617,213	417,589	159,380
	3 mos.	912	5,580,284	1,463,790	7,678,178	709,368	1,067,988	176,238	2,446 159	4,671,121	60.8	3,007,057	1,832,057	1,172,490	534,181
Chicago & Illinois Midland	March	131	564,390	1,156	591,935	49,573	78,278	20,935	125,641	298,259	50.4	293,676	94,908	96,634	80,313
	3 mos.	131	1,535,944	3,650	1,612,460	149,069	227,804	67,346	354,335	871,472	54.0	740,988	246,968	261,718	215,161
Chicago & North Western	March	8,100	9,429,747	2,387,989	13,073,090	1,492,004	1,961.069	202,045	4,112,976	8,196,998	62.7	4,876,092	2,797,777	2,733,958	1,859,224
	3 mos.	8,100	26 266,923	6,471,455	36,296,538	4,515,617	5,978,107	593,367	11,908,543	24,274,326	66.9	12,022,212	6,883,212	6,557,157	3,243,635
Chicago, Burlington & Quincy	March	9,030	14,540,219	2,132,183	18,242,460	1,699,649	2,133,695	260,054	4,494,060	9,110,276	49.9	9.132,184	4,873,690	4,676,332	1,421,592
	3 mos.	9 034	39,074,172	6,404,669	49,579,607	4,795,882	6,182,539	760,120	12,580,690	25,739 704	51.9	23,839,903	12,636,011	11,995,746	5,835,994
Chicago Great Western	March	1,501	2,279,357	190,362	2,638,557	319,661	289.167	63,825	839,505	1,579,972	59.9	1,058,585	487,302	304,056	248,254
	3 mos.	1,501	6,119,565	605,524	7,197,079	915,554	839,843	188,273	2,436,215	4,563,420	63.4	2,633,659	1,400,511	860,197	610,014
Chicago, Indianapolis & Louisville	March	541	1,014,738	110,688	1.205,793	104,270	173,158	30,342	353,367	697,896	57.9	507,897	445,771	387,655	216 368
	3 mos.	541	2,751,101	290,444	3,257,258	305,087	511,250	89,507	988,514	2,004,329	61.5	1,252,929	1,034,496	843,621	522,682

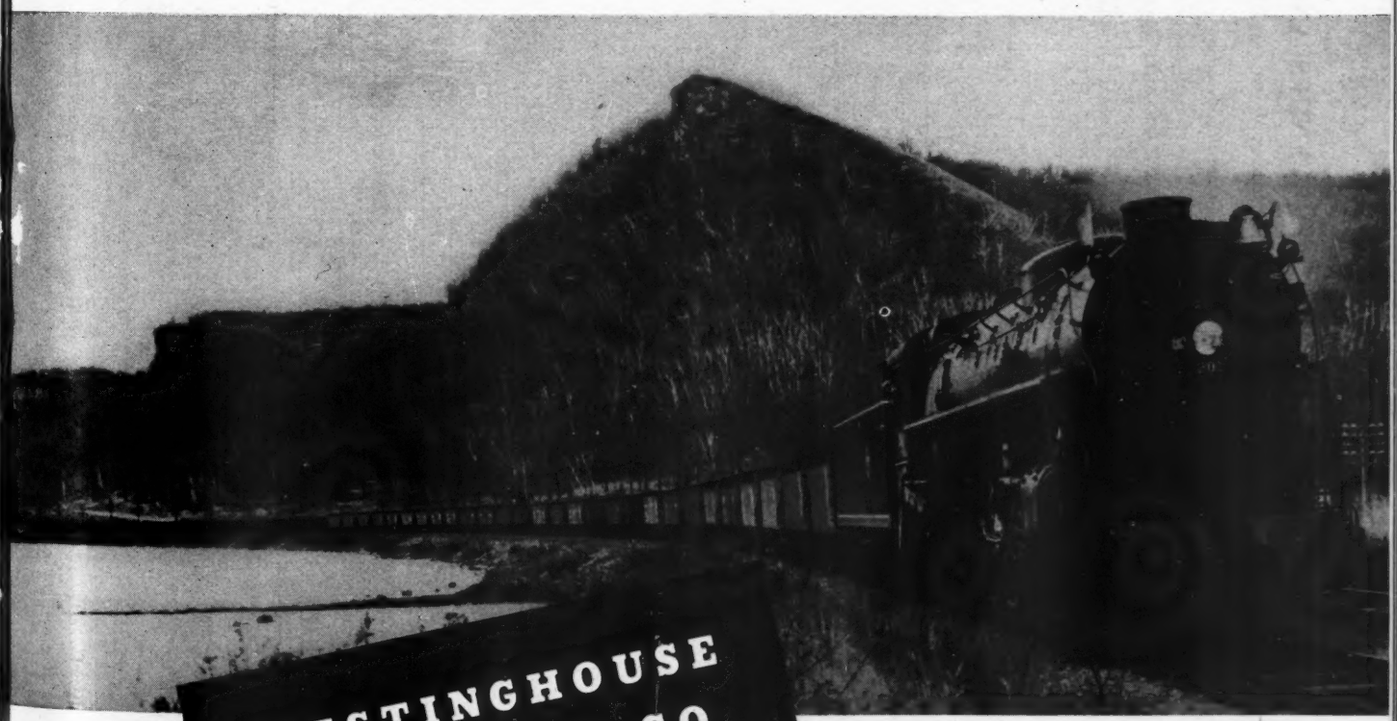
Table continued on next left-hand page

Partners... in PRODUCTION



Of all the facilities required in wartime production, transportation is paramount . . . An interchange of materials, finished products, and complete equipment must be consistently maintained. Quantity, time-saving, and continuity are the requisites . . . Adequate and efficient control of train speed, as provided by the AB Brake is playing a part in volume shipments of vital freight, with reliability and dispatch. Smooth handling, made possible by its superior functioning is a distinct asset in safeguarding and expediting traffic movements . . . AB brake cars are the most serviceable under today's intensive requirements — they spend less time in the shop and more on the road . . . With the increasing proportion of such cars in service, the marked advantages of better braking become cumulative.

"AB" Brakes



WESTINGHOUSE
AIR BRAKE CO.
Wilmerding, Penna.

Chicago, Indianapolis & Louisville ..... March 3 mos. 541 541 1,014,738 2,751,101 110,688 290,444 1,205,793 3,257,258 104,270 305,087 173,158 511,250 30,342 89,507 353,367 988,514 697,896 2,004,329 57.9 61.5 507,897 1,252,929 445,771 1,034,496 387,655 843,621 216 368 522,682

1943

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of Road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1943	1942
Chicago, Milwaukee, St. Paul & Pacific	March	10,791	$14,638,340	$2,085,125	$18,216,814	$1,790,453	$2,441,426	$236,594	$5,397,574	$10,407,245	57.1	$7,809,569	$5,877,569	$5,754,503	$2,278,744
	3 mos.	10,798	41,196,685	5,973,186	51,209,478	5,053,234	6,825,377	694,309	15,549,085	29,747,236	58.1	21,462,242	14,105,242	13,573,712	7,519,201
Chicago, Rock Island & Pacific	March	7,773	11,255,635	3,081,205	15,410,144	1,203,390	1,930,916	308,646	4,303,132	8,278,393	53.7	7,131,751	5,205,472	4,695,365	2,167,835
	3 mos.	7,773	30,319,584	8,506,033	41,856,629	3,405,078	5,398,563	928,017	12,171,187	23,467,493	56.1	18,389,136	13,277,128	11,962,689	5,649,407
Chicago, St. Paul, Minneapolis & Omaha	March	1,629	1,809,333	264,658	2,220,639	243,681	350,956	36,872	847,343	1,553,790	70.0	666,849	536,212	454,589	208,017
	3 mos.	1,629	5,092,774	813,490	6,312,373	735,589	1,004,344	120,567	2,628,234	4,709,319	74.6	1,603 054	1,218,104	998,807	336,598
Clinchfield Railroad	March	302	1,225,766	11,004	1,246,337	98,191	158,741	21,884	227,901	529,683	42.5	716,654	591,132	598,695	451,580
	3 mos.	304	3,325,363	30,919	3,381,374	247,209	441,216	65,188	655,671	1,473,570	43.6	1,907,804	1,532,995	1,557,454	1,288,804
Colorado & Southern	March	748	795,559	224,387	1,111,428	127,629	153,820	15,262	312,320	655,886	59.0	455,542	295,304	278,270	184,015
	3 mos.	748	2,180,256	713,055	3,152,841	307,106	443,709	46,894	962,659	1,893,705	60.1	1,259,136	831,697	768,449	371,644
Fort Worth & Denver City	March	804	677,807	419,122	1,197,493	143,383	123,824	24,832	269,905	619,323	51.7	578,170	334,179	298,264	166,584
	3 Mos.	804	1,782,937	1,132,578	3,204,180	334,568	329,975	70,451	788,816	1,693,656	52.9	1,510,524	870,999	765,466	507,177
Colorado & Wyoming	March	42	100,228	.....	157,374	13,786	11,323	939	59,459	90,566	57.2	66,808	22,324	23,144	31,350
	3 mos.	42	307,566	.....	469,776	37,553	32,965	2,625	173,156	260,328	55.4	209,448	70,929	70,266	89,520
Columbus & Greenville	March	168	118,926	5,310	133,509	21,706	20,873	3,862	40,917	99,215	74.3	34,294	13,443	15,061	—9,303
	3 mos.	168	347,177	18,852	392,054	63,365	60,473	10,788	121,454	292,946	74.6	99,108	38,654	40,707	3,604
Delaware & Hudson	March	848	4,004,955	124,625	4,234,571	401,973	951,772	44,237	1,339,122	2,837,602	67.0	1,396,969	848,038	853,457	834,106
	3 mos.	848	10,588,622	448,216	11,333,549	1,154,789	2,651,037	132,348	3,802,831	8,058,136	71.1	3,275,413	1,953,094	1,940,351	2,002,173
Delaware, Lackawanna & Western	March	984	5,577,483	826,585	7,022,176	569,767	944,185	106,240	2,537,463	4,328,207	61,6	2,693,969	1,370,969	1,271,533	824,163
	3 mos.	984	14,754,899	2,448,796	18,972,717	1,570,462	2,736,885	320,126	7,331,704	12,489,403	65.8	6,483,314	3,165,314	2,920,915	1,882,565
Denver & Rio Grande Western	March	2,405	4,765,984	904,994	5,907,792	415,119	923,342	95,946	1,652,357	3,261,338	55.2	2,646,454	1,682,541	1,514,635	799,916
	3 mos.	2,405	13,139,510	2,261,628	16,040,543	1,107,532	2,674,764	276,826	4,683,983	9,228,950	57.5	6,811,593	4,435,152	3,944,662	1,974,441
Denver & Salt Lake	March	232	253,506	8,427	273,772	36,026	51,241	2,620	88,036	189,867	69.6	83,905	54,825	94,456	59,611
	3 mos.	232	773,373	26,208	832,839	110,033	144,587	7,887	260,506	556,434	66.8	276,405	190,347	312,908	255,108
Detroit & Mackinac	March	242	61,968	9,143	81,161	13,434	19,416	758	30,083	67,434	83.1	13,727	5,559	3,292	12,669
	3 mos.	242	177,574	24,995	233,392	37,561	53,169	2,770	89,145	193,410	82.8	39,982	19,539	13,193	25,123
Detroit & Toledo Shore Line	March	50	470,140	.....	471,614	28,005	25,943	9,242	100,972	172,427	36.6	299,187	192,137	123,756	69,816
	3 mos.	50	1,271,209	.....	1,274,630	76,339	75,633	27,727	288,140	491,871	38.6	782,759	481,403	293,015	256,043
Detroit, Toledo & Ironton	March	464	849,197	1,083	917,626	92,260	105,932	14,364	192,070	428,940	46.7	488,686	283,919	271,897	196,738
	3 mos.	464	2,545,919	3,015	2,727,691	261,345	308,852	42,639	565,783	1,248,328	45.8	1,479,363	833,886	786,344	605,079
Duluth, Missabe & Iron Range	March	546	206,112	3,364	237,596	295,292	496,634	4,116	273,451	1,105,854	465.4	—868,258	—942,704	—906,629	—337,588
	3 mos.	545	460,467	9,393	576,867	894,212	1,424,178	12,828	748,010	3,195,457	553.9	—2,618,590	—2,830,193	—2,677,690	—1,708,774
Duluth, Winnipeg & Pacific	March	175	183,000	4,700	192,400	33,609	27,157	1,899	88,601	154,774	80.4	37,626	22,241	—4,233	12,600
	3 mos.	175	578,000	14,400	605,600	87,545	82,585	5,651	260,724	446,720	73.8	158,880	111,819	41,245	49,027
Elgin, Joliet & Eastern	March	392	2,564,725	14	2,962,284	197,342	804,886	17,619	993,008	2,073,336	70.0	888,948	266,180	153,187	358,912
	3 mos.	392	7,095,052	39	8,257,598	581,612	2,374,645	48,853	2,848,552	6,033,192	73.1	2,224,406	679,875	361,295	863,905
Erie	March	2,242	12,089,686	691,109	13,488,598	963,346	2,130,565	216,365	4,458,152	8,127,694	60.3	5,360,904	2,175,640	1,686,765	1,662,787
	3 mos.	2,242	32,609,407	2,039,050	36,602,365	2,656,094	5,939,929	622,450	12,272,714	22,563,154	61.6	14,039,211	5,983,164	4,769,191	4,436,587
Florida East Coast	March	682	1,682 932	1,323,828	3,217,994	281,711	228,044	42,526	766,332	1,433,201	44.5	1,784,793	1,157,160	1,015,351	620,422
	3 mos.	682	4,864,536	3,386,680	8,847,241	811,893	678,746	121,379	2,145,906	4,100,536	46.3	4,746,705	3,106 907	2,739,241	1,297,773
Georgia Railroad	March	329	700,256	163,161	916,130	80,059	91,827	21,549	282,990	495,734	54.1	420,396	391,760	362,820	232,425
	3 mos.	329	2,038,572	485,043	2,666,433	219,967	260,449	65,140	839,701	1,442,896	54.1	1,223,537	1,141,219	1,059,032	608,005
Georgia & Florida	March	408	159,881	4,143	170,409	40,313	23,038	9,544	54,320	133,750	78.5	36,659	27,217	18,110	4,989
	3 mos.	408	439,172	13,642	472,060	111,344	66,181	29,078	150,102	375,079	79.5	96,981	69,511	48,273	25,272
Grand Trunk Western	March	1,026	2,463,000	250,000	2,909,000	353,740	471,354	34,792	1,084,421	2,045,120	70.3	863,880	633,568	589,161	206,352
	3 mos.	1,026	7,212,000	665,000	8,396,000	1,057,517	1,291,674	104,370	3,057,367	5,797,272	69.1	2,598,728	1,985,908	1,923,066	576,685
Canadian National Lines in New England	March	172	140,800	6,600	165,700	46,881	14,961	2,485	112,225	199,139	120.2	—33,439	—53,742	—85,629	—45,829
	3 mos.	172	372,100	19,800	443,100	134,600	76,637	7,311	266,247	535,010	120.7	—91,910	—152,819	—240,547	—109,477
Great Northern	March	8,118	11,840,266	1,208,479	14,022,012	1,982,456	2,945,592	205,359	3,786,055	9,327,797	66.5	4,694,215	2,134,927	2,040,423	1,224,503
	3 mos.	8,118	31,657,920	3,401,771	37,829,280	5,531,841	8,177,891	629,904	10,894,408	26,417,790	69.8	11,411,490	5,367,902	5,125,900	3,292,111
Green Bay & Western	March	234	231,279	555	239,886	42,071	19,187	8,342	61,784	138,012	57.5	101,874	77,894	72,258	42,931
	3 mos.	234	625,997	1,516	650,484	112,902	55,935	24,086	180,383	395,635	60.8	254,849	183,491	164,418	105,149
Gulf & Ship Island	March	259	183,250	52,613	255,273	69,386	45,300	2,897	86,681	214,338	84.0	40,935	20,909	4,811	51,150
	3 mos.	259	546,586	142,977	749,058	216,915	117,318	8,653	255,316	626,514	83.6	122,544	63,152	9,066	57,350

Table continued on next left-hand page

MAINTAIN SCHEDULES

EVERY time your train schedules are upset on account of some engine troubles the importance of dependable wear-resisting parts is emphasized.

Comparison of locomotive performance throughout the country has convinced mechanical department officials that the wear-resisting properties of HUNT-SPILLER *Air Furnace* GUN IRON are a big factor in the prevention of engine trouble. Keep your power rolling.

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HUNT-SPILLER GUN IRON

Air Furnace

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of Road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1943	1942
Gulf, Mobile & Ohio	March	1,972	$3,135,455	$206,800	$3,440,671	$466,130	$478,422	$82,902	$827,332	$1,969,571	57.2	$1,471,100	$704,218	$464,631	$300,100
	3 mos.	1,972	8,922,487	558,824	9,747,798	1,321,909	1,376,353	245,445	2,526,840	5,795,687	59.5	3,952,111	1,987,852	1,362,271	796,488
Illinois Central	March	4,824	14,423,223	2,452,190	17,900,350	2,452,493	3,390,231	200,772	4,994,150	11,587,225	64.7	6,313,125	3,494,660	3,100,272	1,974,470
	3 mos.	4,830	41,606,750	7,029,729	51,513,309	7,492,848	9,109,753	612,522	14,429,272	33,274,597	64.6	18,238,712	10,326,555	9,090,974	5,470,409
Yazoo & Mississippi Valley	March	1,525	3,010,703	262,628	3,414,485	453,763	414,211	39,755	882,875	1,880,219	55.1	1,534,266	844,146	722,759	1,044,624
	3 mos.	1,525	8,197,956	914,539	9,510,424	1,387,103	1,150,524	120,190	2,648,278	5,572,441	58.6	3,937,983	2,247,821	1,849,072	2,490,590
Illinois Central System	March	4,824	14,423,223	2,452,190	17,900,350	2,906,256	3,804,442	240,527	5,877,025	13,467,444	63.2	7,847,391	4,336,724	3,822,944	3,025,006
	3 mos.	6,355	49,804,706	7,944,268	61,023,733	8,879,951	10,260,277	732,712	17,077,550	38,847,038	63.7	22,176,695	12,561,937	10,948,785	7,978,737
Illinois Terminal	March	476	573,647	180,748	821,211	92,342	87,151	18,022	241,978	462,279	56.29	358,932	127,302	113,708	150,064
	3 mos.	476	1,552,627	529,510	2,272,111	249,028	243,752	54,743	679,256	1,294,096	56.96	978,015	376,980	344,475	402,190
Kansas City Southern	March	878	2,927,404	407,573	3,539,498	565,228	442,251	58,011	837,382	2,008,246	56.7	1,531,252	873,252	628,683	632,128
	3 mos.	878	8,864,963	986,907	10,455,890	1,811,850	1,254,346	175,343	2,457,611	6,012,731	57.5	4,443,159	2,469,159	1,719,445	1,373,764
Kansas, Oklahoma & Gulf	March	328	392,163	1,166	396,374	42,076	19,452	9,795	81,286	163,749	41.3	232,625	130,128	102,926	43,322
	3 mos.	328	1,081,953	3,545	1,096,629	106,000	51,936	28,982	221,318	440,556	40.2	656,073	394,955	317,267	137,979
Lake Superior & Ishpeming	March	156	30,259	177	33,356	28,183	43,425	677	42,775	123,002	368.8	—89,646	—115,024	—105,616	28,091
	3 mos.	156	98,560	531	107,408	82,797	128,372	1,903	94,742	331,122	308.3	—223,714	—299,383	—272,556	—127,830
Lehigh & Hudson River	March	96	347,616	.....	348,503	25,293	34,574	4,043	92,372	163,003	46.8	185,500	70,687	41,602	53,529
	3 mos.	96	829,790	570	832,910	77,669	89,724	11,717	238,162	438,190	52.6	394,720	167,309	91,937	127,964
Lehigh & New England	March	190	552,804	.....	555,455	47,079	112,490	6,833	160 563	347,011	62.5	208,444	105,956	130,593	88,226
	3 mos.	190	1,478,440	.....	1,485,851	123,399	334,691	19,619	453,585	987,673	66.5	498,178	252,508	314,993	266,026
Lehigh Valley	March	1,260	6,687,313	449,399	7,670,148	828,026	1,192,454	111,635	2,579,734	4,901,566	63.9	2,768,582	1,663,985	1,302,389	1,021,611
	3 mos.	1,260	18,413,252	1,287,224	21,196,751	1,958,261	3,484,944	328,386	7,630,978	13,965,922	65.9	7,230,829	4,460,675	3,290,613	1,796,464
Louisiana & Arkansas	March	854	1,426,103	108,729	1,584,930	385,085	155,274	31,060	296,864	923,766	58.3	661,164	242,901	181,128	224,149
	3 mos.	854	4,313,212	330,443	4,820,709	1,067,229	488,437	91,740	915,640	2,737,334	56.8	2,083,375	801,373	602,823	583,095
Louisville & Nashville	March	4,745	13,360,199	4,029,249	18,351,402	1,589,926	2,656,575	202,366	4,942,157	9,868,707	53.8	8,482,695	2,049,273	2,362,379	2,112,956
	3 mos.	4,745	37,530,716	10,213,669	50,478,477	4,545,058	7,639,667	593,666	13,918,098	28,169,512	55.8	22,308,965	5,679,143	6,421,462	5,479,394
Maine Central	March	988	1,532,087	294,455	1,939,819	213,437	268,936	9,999	592,839	1,134,754	58.5	805,065	468,590	398,342	287,407
	3 mos.	988	3,886,014	717,191	4,907,655	632,255	762,686	36,423	1,596,926	3,171,929	64.6	1,735,726	991,047	845,498	690,836
Midland Valley	March	351	162,943	20	165,271	16,114	11,724	2,217	41,195	76,663	46.4	88,608	34,843	27,057	13,725
	3 mos.	351	457,347	816	467,899	41,670	36,231	6,495	119,393	218,142	46.4	249,757	166,954	142,077	71,079
Minneapolis & St. Louis	March	1,408	1,279,726	25,304	1,348,837	192,663	166,473	57,457	373,557	835,351	61.9	513,486	402,385	387,164	304,752
	3 mos.	1,408	3,395,538	83,870	3,599,845	425,426	478,214	178,084	1,098,735	2,313,596	64.3	1,286,249	1,045,915	1,006,897	831,191
Minneapolis, St. Paul & Sault Ste. Marie	March	4,277	3,181,453	180,953	3,599,873	546,282	586,888	67,749	1,355,953	2,670,165	74.2	929,708	528,957	517,912	482,489
	3 mos.	4,277	8,754,808	532,863	9,957,870	1,499,988	1,786,986	207,772	4,000,449	7,811,645	78.4	2,146,225	1,214,864	1,153,424	1,021,244
Duluth, South Shore & Atlantic	March	551	309,940	22,837	354,145	55,709	52,695	7,437	125,266	247,631	69.9	106,514	86,338	77,527	30,693
	3 mos.	551	794,358	60,390	911,241	161,788	155,996	23,467	366,527	729,018	80.0	182,223	122,926	104,439	110,295
Spokane International	March	152	217,249	8,017	233,316	30,755	8,995	2,773	40,560	89,418	38.3	143,898	31,476	25,963	15,881
	3 mos.	152	500,926	16,364	541,585	62,281	25,148	8,497	108,653	220,784	40.8	320,801	120,489	99,643	31,403
Mississippi Central	March	158	143,188	6,465	151,640	32,039	16,628	8,850	33,789	97,029	64.0	54,611	34,191	26,549	27,087
	3 mos.	158	413,756	12,089	432,485	73,115	43,605	25,704	93,705	253,180	58.5	179,305	111,923	89,507	66,358
Missouri & Arkansas	March	365	199,007	2,479	208,338	46,223	18,192	7,595	71,468	150,601	72.3	57,737	34,696	19,126	17,745
	3 mos.	365	521,447	8,352	555,423	126,148	54,186	21,273	190,565	411,979	74.2	143,444	88,979	46,619	26,500
Missouri-Illinois	March	172	255,560	361	257,507	34,608	32,878	3,286	64,644	139,919	54.3	117,588	47,705	36,910	47,443
	3 mos.	172	750,606	1,037	755,580	87,437	97,117	9,769	193,665	405,457	53.7	350,123	125,599	97,695	133,768
Missouri-Kansas-Texas Lines	March	3,293	5,329,116	1,106,595	6,903,717	1,635,741	800,754	126,097	1,942,905	4,729,160	68.5	2,174,557	1,349,536	794,379	736,892
	3 mos.	3,293	15,072,204	3,122,512	19,507,628	4,147,368	2,359,983	365,180	5,553,391	13,077,234	67.0	6,430,394	4,213,751	2,674,881	1,717,948
Missouri Pacific	March	7,096	14,689,784	2,566,661	18,468,599	1,698,384	2,164,660	274,802	4,841,307	9,472,750	51.3	8,995,849	4,515,479	3,673,908	2,756,930
	3 mos.	7,096	42,687,831	6,990,977	53,105,117	4,737,183	6,259,122	832,175	14,331,604	27,581,171	51.9	25,523,946	14,491,008	11,883,670	7,167,196
Gulf Coast Lines	March	1,734	3,013,341	313,381	3,472,883	413,490	275,206	46,382	746,707	1,561,580	44.97	1,911,303	845,475	567,194	1,009,681
	3 mos.	1,734	8,982,518	852,953	10,260,807	1,217,240	806,758	147,915	2,247,776	4,651,784	45.34	5,609,023	2,526,332	1,675,712	2,580,680
International Great Northern	March	1,155	1,872,268	425,023	2,493,953	304,534	291,658	31,349	678,835	1,390,466	55.8	1,103,487	548,031	405,438	224,011
	3 mos.	1,155	5,456,913	1,136,936	7,147,178	827,111	827,598	96,929	1,951,655	3,945,575	55.2	3,201,603	1,616,301	1,225,663	354,536
Monongahela	March	171	622,719	1,586	626,474	67,567	50,123	701	147,884	269,835	43.1	356,639	202,095	116,364	153,663
	3 mos.	171	1,777,394	4,409	1,789,282	189,893	134,370	2,148	439,347	777,366	43.4	1,011,916	550,049	292,911	349,618

Table continued on next left-hand page

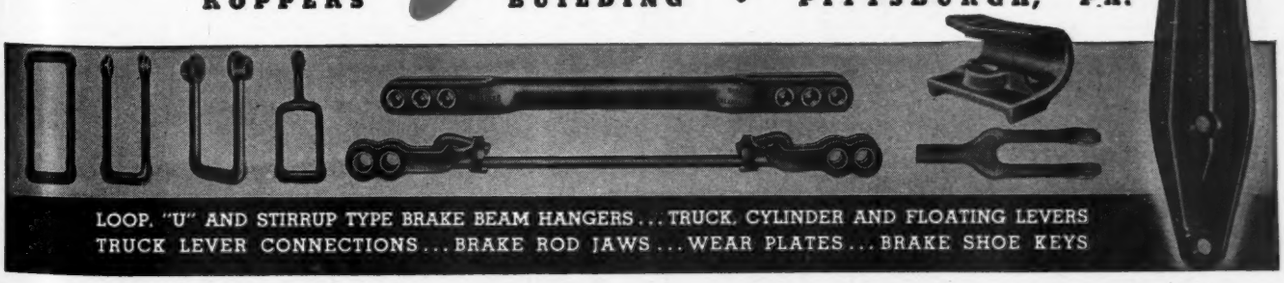
LESS WEIGHT — LONGER LIFE

Schaefer Forged Steel Foundation Brake Gear Appliances, standard on many lines, are proving their sturdiness on the long heavy trains that are moving America's mechanized war equipment —faster—and safely.

Railroads interested in a regular equipment-repair program should weigh the value of Schaefer equipment in the light of its sound structure and its longer service life.

Schaefer EQUIPMENT COMPANY

KOPPERS BUILDING • PITTSBURGH, PA.



LOOP, "U" AND STIRRUP TYPE BRAKE BEAM HANGERS... TRUCK, CYLINDER AND FLOATING LEVERS
TRUCK LEVER CONNECTIONS... BRAKE ROD JAWS... WEAR PLATES... BRAKE SHOE KEYS

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of Road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1943	Net railway operating income 1942
Montour	March	51	$250,002	.....	$251,600	$13,099	$58,556	$981	$69,014	$149,716	59.5	$101,884	$33,020	$63,147	$54,872
	3 mos.	51	694,097	.....	699,405	35,952	164,281	2,732	198,033	424,736	60.7	274,669	78,236	185,114	135,548
Nashville, Chattanooga & St. Louis	March	1,090	2,529,176	732,426	3,504,059	356,180	543,854	73,832	948,030	2,023,183	57.7	1,480,876	874,256	797,177	254,011
	3 mos.	1,090	7,208,887	1,825,330	9,730,935	1,037,407	1,546,614	222,710	2,750,187	5,834,396	60.0	3,896,539	2,306,225	2,074,003	639,044
Nevada Northern	March	165	51,381	1,090	54,849	10,768	3,759	1,164	9,419	29,410	53.6	25,439	11,707	13,630	13,409
	3 mos.	165	155,845	3,530	166,516	28,667	9,849	3,576	27,292	81,542	49.0	84,974	34,810	41,875	38,226
New York Central	March	10,786	44,588,867	10,555,118	60,483,851	6,775,781	9,466,473	606,613	18,878,623	37,659,017	62.3	22,824,834	8,956,621	7,727,073	5,487,795
	3 mos.	10,816	118,219,531	30,162,288	163,034,635	18,433,073	27,192,475	1,876,522	54,791,250	107,893,671	66.2	55,140,964	26,882,437	23,194,154	12,325,606
Pittsburgh & Lake Erie	March	233	2,975,410	92,059	3,174,104	270,381	847,729	37,656	848,807	2,102,080	66.2	1,072,024	134,025	619,998	525,443
	3 mos.	233	8,078,185	282,266	8,630,029	733,680	2,494,016	120,611	2,427,217	6,071,000	70.4	2,559,029	129,111	1,660,551	1,218,237
New York, Chicago & St. Louis	March	1,688	8,828,044	215,559	9,190,650	650,405	1,015,255	129,395	2,499,552	4,463,752	48.6	4,726,898	1,793,235	1,288,902	1,447,575
	3 mos.	1,688	23,900,980	565,171	24,886,764	1,935,225	3,000,498	387,388	7,075,109	12,893,687	51.8	11,993,077	4,982,619	3,444,833	3,674,433
New York, New Haven & Hartford	March	1,838	8,925,786	5,042,330	15,153,739	1,485,727	2,117,155	119,380	4,702,861	9,063,222	59.8	6,090,517	3,980,282	2,891,543	2,263,345
	3 mos.	1,838	23,210,943	15,340,884	41,808,346	4,296,659	5,607,513	381,745	13,196,539	25,273,249	60.5	16,535,097	10,212,030	7,328,739	4,789,237
New York Connecting	March	21	193,901	.....	222,107	44,014	11,264	.....	45,836	102,845	46.3	119,262	39,223	158,771	274,979
	3 mos.	21	567,195	.....	631,326	169,975	45,431	.....	135,429	355,644	56.3	275,682	56,799	373,170	508,495
New York, Ontario & Western	March	546	567,744	17,022	642,447	82,528	137,258	21,070	313,392	585,883	91.2	56,564	22,379	5,420	—8,781
	3 mos.	546	1,601,514	61,679	1,846,634	243,035	384,096	64,558	944,043	1,732,825	93.8	113,809	11,848	—94,021	—88,725
New York, Susquehanna & Western	March	262	492,663	38,267	551,958	30,998	33,947	3,673	193,275	276,885	50.2	275,073	182,546	126,414	74,431
	3 mos.	262	1,304,222	119,813	1,488,278	90,165	93,989	11,570	536,203	778,471	52.3	709,807	495,971	287,124	142,393
Norfolk & Western	March	2,156	11,934,031	1,248,951	13,604,796	1,287,055	2,602,340	174,073	2,979,593	7,351,705	54.0	6,253,091	1,311,886	1,974,954	1,504,239
	3 mos.	2,156	33,343,843	3,407,741	37,959,149	3,567,457	7,310,524	509,599	8,329,989	20,597,533	54.3	17,361,616	3,596,337	5,665,022	5,201,382
Norfolk Southern	March	734	682,267	27,284	735,433	146,048	76,264	30,267	233,057	514,194	69.9	221,239	136,884	102,885	89,190
	3 mos.	734	1,849,648	72,910	1,994,235	419,012	226,426	88,989	620,016	1,433,164	71.9	561,071	343,661	254,514	159,421
Northern Pacific	March	6,867	9,419,123	1,153,910	11,501,361	1,407,535	1,964,475	165,728	3,263,984	7,287,230	63.4	4,214,131	2,024,716	2,495,845	1,719,018
	3 mos.	6,867	25,990,594	3,009,844	31,573,771	3,810,746	5,631,204	497,182	9,350,016	20,661,354	65.4	10,912,417	5,302,226	6,613,183	4,281,101
Northwestern Pacific	March	330	473,293	13,053	506,078	188,793	60,291	2,675	152,220	411,832	81.4	94,246	71,291	40,671	—7,865
	3 mos.	330	1,280,174	34,463	1,366,796	463,001	151,080	7,309	416,767	1,059,188	77.5	307,608	238,862	152,698	—71,577
Oklahoma City-Ada-Atoka	March	132	124,855	.....	126,051	15,660	4,573	1,103	29,063	55,019	43.6	71,032	31,103	18,675	29,705
	3 mos.	132	372,130	.....	377,776	53,210	13,883	3,708	93,610	177,303	46.9	200,473	118,491	69,617	66,734
Pennsylvania	March	10 180	55,190,633	17,707,151	78,754,985	8,532,650	14,289,774	858,473	30,677,435	56,997,334	72.4	21,757,651	7,740,280	6,923,484	4,783,122
	3 mos.	10,182	153,001,059	51,635,085	220,818,357	25,214,604	39,748,242	2,774,676	86,572,863	162,128,632	73.4	58,689,725	22,027,616	18,944,618	10,495,077
Long Island	March	378	1,176,375	1,879,214	3,210,578	510,354	501,980	37,114	1,480,672	2,590,978	80.7	619,600	342,535	152,179	97,907
	3 mos.	378	3,070,326	5,575,406	9,088,957	1,779,747	1,441,221	110,316	4,257,168	7,751,242	85.3	1,337,715	574,846	—2,836	39,328
Pennsylvania-Reading Seashore Lines	March	399	506,380	274,623	809,491	185,947	125,046	7,995	421,447	761,971	94.1	47,520	—45,769	—128,468	—166,142
	3 mos.	400	1,353,625	755,046	2,192,071	456,628	339,528	21,410	1,205,243	2,091,782	95.4	100,289	—166,944	—383,094	—542,377
Pere Marquette	March	2,032	4,254,670	265,315	4,718,925	519,449	751,484	66,724	1,560,451	3,027,474	64.2	1,691,451	766,055	659,892	394,454
	3 mos.	2,032	11,700,528	768,571	13,056,381	1,540,271	2,207,016	201,953	4,427,495	8,776,013	67.2	4,280,368	2,009,063	1,827,973	998,317
Pittsburg & Shawmut	March	97	124,120	.....	124,314	16,931	20,610	1,880	31,817	77,088	62.0	47,226	28,770	27,872	25,639
	3 mos.	97	315,471	.....	316,040	45,893	59,884	5,906	84,058	210,610	66.6	105,430	65,536	64,583	72,220
Pittsburgh & West Virginia	March	136	662,814	.....	683,294	86,927	108,923	19,277	190,765	431,110	63.1	252,184	161,815	147,660	125,486
	3 mos.	136	1,880,828	79	1,938,803	250,370	329,594	57,830	534,895	1,245,093	64.2	693,710	446,264	416,632	382,313
Pittsburg, Shawmut & Northern	March	190	138,371	.....	141,126	24,510	28,471	960	47,688	108,013	76.5	33,113	26,664	19,049	20,429
	3 mos.	190	358,450	.....	364,457	54,801	74,452	3,029	132,224	282,981	77.6	81,476	62,752	42,213	33,710
Reading	March	1,420	9,369,669	765,516	10,659,692	1,002,771	1,896,270	77,973	3,388,071	6,559,407	61.5	4,100,285	2,491,469	2,242,576	1,645,875
	3 mos.	1,420	25,106,458	2,274,470	28,779,501	2,762,221	5,664,416	245,000	9,674,036	18,949,201	65.8	9,830,300	5,677,488	5,121,816	3,666,872
Richmond, Fredericksburg & Potomac	March	118	1,626,811	1,237,192	3,129,426	139,707	234,433	12,094	853,880	1,334,129	42.6	1,795,297	685,929	472,451	460,023
	3 mos	118	4,871,556	3,446,156	9,018,313	387,948	689,647	33,878	2,195,047	3,593,690	39.8	5,424,623	1,683,014	1,101,632	1,085,345
Rutland	March	407	270,606	51,905	396,195	46,787	78,842	11,729	179,345	330,793	83.5	65,402	42,178	46,960	40,027
	3 mos.	407	697,193	154,773	1,052,018	143,021	215,282	32,051	526,625	957,586	91.0	94,432	26,190	38,991	85,398

Table continued on next left-hand page

LAST YEAR'S BONDS GOT US STARTED

THIS YEAR'S BONDS

ARE TO WIN!

★ Last year saw nearly 30,000,000 workers voluntarily buying War Bonds through some 175,000 Pay-Roll Savings Plans. And buying these War Bonds at an average rate of practically 10% of their gross pay!

This year we've got to top *all* these figures—and top them handsomely! For the swiftly accelerated purchase of War Bonds is one of the greatest services we can render to our country . . . and to our own sons . . . and our neighbors' sons. Through the mounting purchase of War Bonds we forge a more potent weapon of victory, and build stronger bulwarks for the preservation of the American way of life.

"But there's a Pay-Roll Savings Plan already running in my plant."

Sure, there is—but how long is it since *you've* done anything about it? These plans won't run without winding, any more than your watch! Check up on it today. If it doesn't show substantially more than 10% of your plant's pay-roll going into War Bonds, it needs winding!

And you're the man to wind it! Organize a vigorous drive. In just 6 days, a large airplane manufacturer increased his plant's showing from 35% of employees and 2½% of pay-roll, to 98% of employees and 12% of pay-roll. A large West Coast shipyard keeps participation jacked up to 14% of pay-roll! You can do as well, or better.

By so doing, you help your nation, you help your workers, and you also help yourself. In plant after plant, the successful working out of a Pay-Roll Savings Plan has given labor and management a common interest and a common goal. Company spirit soars. Minor misunderstandings and disputes head downward, and production swings up.

War Bonds will help us win the war, and help close the inflationary gap. And they won't stop working when victory comes! On the contrary—they will furnish a reservoir of purchasing power to help American business re-establish itself in the markets of peace. *Remember, the bond charts of today are the sales curves of tomorrow!*

You've done your bit Now do your best!

THIS SPACE IS A CONTRIBUTION TO AMERICA'S ALL-OUT WAR EFFORT BY

RAILWAY AGE

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MARCH AND THREE MONTHS OF CALENDAR YEAR 1943—CONTINUED

Name of Road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of: Way and structures	Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income: 1943	1942
St. Louis-SanFrancisco	March	4,671	$6,683,813	$1,799,872	$9,090,460	$911,994	$1,531,430	$147,994	$2,747,254	$5,646,705	62.1	$3,443,755	$2,166,008	$2,135,265	$1,478,312
	3 mos.	4,671	18,074,148	5,058,521	24,825,491	2,567,612	4,381,807	438,577	7,862,831	16,146,556	65.0	8,678,935	5,629,029	5,562,888	3,569,649
St. Louis, San Francisco & Texas	March	159	306,913	35,133	349,728	32,172	31,698	9,630	104,709	185,016	52.9	164,712	101,123	73,752	2,758
	3 mos.	159	925,973	65,239	1,013,193	89,218	85,060	27,900	283,641	505,034	49.8	508,159	319,417	238,055	36,042
St. Louis Southwestern Lines	March	1,617	4,897,212	268,619	5,295,290	421,254	483,692	98,081	1,207,406	2,320,792	43.8	2,974,498	990,822	692,863	909,351
	3 mos.	1,617	14,269,545	849,924	15,474,451	1,133,655	1,302,041	288,537	3,507,473	6,558,579	42.4	8,915,872	2,954,200	2,079,870	1,929,607
Seaboard Air Line	March	4,184	8,709,590	3,529,813	13,011,603	1,136,189	1,440,379	227,256	3,406,992	6,671,022	51.3	6,340,581	4,840,581	4,149,268	2,152,559
	3 mos.	4,184	23,989,858	9,828,037	35,955,388	3,236,264	4,283,850	668,012	9,717,268	19,211,442	53.4	16,743,946	13,043,946	11,221,608	4,395,301
Southern Railway	March	6,514	15,197,830	4,687,097	21,174,374	2,075,180	2,882,399	202,728	5,114,742	10,869,742	51.3	10,304,632	2,907,776	2,677,885	2,751,925
	3 mos.	6,514	43,190,416	12,395,531	59,080,695	5,854,864	8,047,639	588,616	14,847,825	31,037,357	52.5	28,043,338	9,114,541	8,358,762	7,266,019
Alabama Great Southern	March	315	1,457,191	406,565	1,957,854	140,145	252,209	23,830	499,099	965,483	49.3	992,371	345,549	277,788	174,359
	3 mos.	315	4,159,025	1,020,816	5,445,005	412,980	740,102	73,225	1,487,525	2,853,869	52.4	2,591,136	898,733	673,373	507,251
Cincinnati, New Orleans & Texas Pacific	March	337	2,498,754	645,936	3,286,323	278,746	475,044	35,660	693,427	1,560,305	47.5	1,726,018	665,514	649,092	494,826
	3 mos.	337	7,108,672	1,540,621	9,030,660	773,763	1,433,971	103,842	2,011,106	4,554,241	50.4	4,476,419	1,644,440	1,555,449	1,248,393
Georgia Southern & Florida	March	397	391,227	266,484	707,249	70,873	54,015	2,440	183,439	325,594	46.0	381,655	127,394	77,862	73,494
	3 mos.	397	1,038,770	647,446	1,818,923	202,162	140,485	7,160	489,991	887,560	48.8	931,363	363,799	256,171	161,752
New Orleans & Northeastern	March	204	948,653	200,379	1,201,545	84,568	113,297	11,999	284,719	526,905	43.9	674,640	179,593	92,779	89,827
	3 mos.	204	2,700,842	558,156	3,402,934	268,043	298,841	36,317	789,575	1,482,953	43.6	1,919,981	576,411	331,434	318,428
Southern Pacific Co.	March	8,319	27,798,941	7,681,095	38,568,792	4,115,018	5,935,073	508,264	10,255,507	22,632,307	58.7	15,936,485	8,242,583	6,897,235	4,103,534
	3 mos.	8,329	76,208,548	20,445,590	105,525,962	11,383,418	16,814,886	1,436,219	29,591,643	64,449,070	61.1	41,076,892	21,875,006	18,032,868	13,217,938
Texas & New Orleans	March	4,341	9,040,081	2,031,658	11,655,539	1,134,089	1,172,935	147,039	2,665,876	5,438,846	46.7	6,216,693	3,242,682	2,640,458	1,626,328
	3 mos.	4,341	24,817,873	5,719,950	32,176,258	3,211,164	3,194,053	421,385	7,291,384	15,084,432	46.9	17,091,826	9,010,769	7,374,037	3,814,910
Spokane, Portland & Seattle	March	929	1,726,676	142,288	2,029,350	185,100	127,097	13,193	566,161	950,088	46.8	1,079,262	975,251	765,436	466,974
	3 mos.	929	4,643,549	404,275	5,456,551	538,996	361,148	37,235	1,567,581	2,670,060	48.9	2,786,491	2,497,884	1,940,440	1,038,526
Tennessee Central	March	286	339,764	40,436	402,144	77,976	53,175	6,641	115,867	270,083	67.2	132,061	90,606	76,543	38,005
	3 mos.	286	904,008	118,022	1,081,496	215,915	151,684	19,767	336,332	770,990	71.3	310,506	206,323	173,845	75,036
Texas & Pacific	March	1,905	3,560,566	1,757,815	5,812,145	687,038	803,092	97,336	1,303,430	3,140,782	54.0	2,671,363	905,637	826,479	679,094
	3 mos.	1,904	9,992,364	4,777,018	16,152,533	1,919,409	2,333,336	284,910	3,746,529	8,975,225	55.6	7,177,308	2,485,529	2,271,936	1,793,030
Texas Mexican	March	162	168,984	582	187,203	23,295	12,318	4,200	39,835	88,056	47.0	99,147	91,368	83,719	59,948
	3 mos.	162	462,954	3,103	532,872	67,443	36,887	11,506	112,362	255,414	47.9	277,458	253,279	225,984	107,369
Toledo, Peoria & Western	March	239	402,233	7	405,437	34,922	19,116	26,642	77,863	168,089	41.5	237,348	223,373	206,237	16,533
	3 mos.	239	1,104,228	54	1,113,025	103,352	52,844	68,503	218,952	475,286	42.7	637,739	597,297	546,077	—73,688
Union Pacific System	March	9,837	28,650,609	6,468,032	37,820,344	5,001,952	6,227,296	447,858	9,464,362	22,656,743	59.9	15,163,601	7,394,630	6,482,546	2,299,569
	3 mos.	9,837	77,607,888	16,987,169	102,324,214	13,489,365	17,529,909	1,463,154	27,563,830	64,421,524	63.0	37,902,690	15,758,308	12,888,044	7,071,654
Utah	March	111	137,369	.....	137,382	15,056	41,792	476	33,864	95,319	69.4	42,063	22,963	20,767	13,677
	3 mos.	111	389,406	.....	389,441	51,906	118,322	1,393	99,115	283,843	72.9	105,598	56,329	50,589	27,290
Virginian	March	657	2,386,299	6,946	2,474,551	224,534	459,635	24,884	441,011	1,203,018	48.6	1,271,533	536,533	617,474	635,111
	3 mos.	659	6,669,898	21,748	6,935,138	604,808	1,377,271	74,262	1,267,616	3,474,784	50.1	3,460,354	1,575,354	1,888,866	1,904,147
Wabash	March	2,393	6,857,167	777,322	8,055,579	790,166	893,188	175,903	2,391,395	4,504,448	55.9	3,551,131	1,457,804	1,068,120	784,229
	3 mos.	2,393	19,106,772	2,219,816	22,486,969	2,092,618	2,658,461	524,767	6,980,320	12,907,589	57.4	9,579,380	4,087,738	2,781,707	1,984,553
Ann Arbor	March	294	506 524	6,078	520,471	44,306	86,336	16,732	201,791	362,612	69.7	157,859	87,374	83,500	28,192
	3 mos.	294	1,309,888	18,437	1,354,347	131,407	244,244	48,723	568,901	1,024,605	75.7	329,742	180,453	170,760	105,485
Western Maryland	March	848	3,229,968	22,047	3,318,987	449,466	571,059	42,390	822,971	1,958,014	59.0	1,360,973	800,973	793,927	521,877
	3 mos.	848	8,786,545	67,168	9,087,642	993,574	1,663,458	129,387	2,297,729	5,302,164	58.3	3,785,478	2,233,478	2,267,273	1,451,637
Western Pacific	March	1,195	3,222,688	312,055	3,672,139	342,912	430,589	74,445	1,075,710	2,039,027	55.5	1,633,112	1,031,986	843,594	692,053
	3 mos.	1,195	8,244,677	755,032	9,407,650	967,552	1,256,941	220,247	2,975,461	5,740,155	61.0	3,667,495	2,390,791	1,849,409	1,236,286
Wheeling & Lake Erie	March	507	2,296,945	17	2,351,741	228,123	371,048	39,708	620,330	1,306,136	55.5	1,045,605	174,357	310,428	185,562
	3 mos.	507	6,427,187	25	6,571,424	619,141	1,072,085	119,187	1,774,223	3,724,693	56.7	2,846,731	445,977	870,288	632,898